JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Vol. VIII MAY, 1920 No. 5

Shadows and Straws

THE REPORT of the Housing Committee of the Reconstruction Commission of the State of New York is an illuminating document. It recites a condition in New York city which can be considered as nothing less than a ghastly reproach to civilization. In that, it offers nothing new, it is true, for we have already had the Pittsburgh survey and many others of varying degree. It is not that side of the report which provides the illumination, but rather must we turn to the constructive ideas advanced. These are confused, it is true, yet the recommendations for legislation are based on constructive lines.

In another respect, also, the report is helpful. It serves to clear away one illusion under which this country has labored. "Restrictive Legislation—such as the New York Tenement House Law—when operating alone— does not supply the worker with a better home," says the report, and for that clear statement there are many who will be thankful. It also adds that "The effect of such laws is to increase the original cost of buildings. This means that for a given cost a workman will obtain a smaller house." The report does also say that "Such legislation as the tenement house law has done much to improve living conditions," but this merely means that a certain class of people having higher incomes than the low-paid class, cannot be exploited to quite the old extent. It does not mean that the lower paid class are any better housed than before.

In the recommended legislation, the principal items are the provision for state loans for housing at low rates of interest, and an enabling act "permitting cities to acquire and hold, or let, adjoining vacant lands, and if necessary to carry on housing. This legislation should be such as to permit conservation of the increment of land values for the benefit of the community creating it." Such was the principle advocated by the Board of Directors of the American Institute of Architects in its memorandum on war housing to the President and Congress, published in the Journal of January, 1918. It is encouraging to hear an official body of a great state supporting the one principle which can have any permanent effect in improving housing conditions.

The report carefully states, however, that the recommended legislation does not mean that the State itself shall build homes, or own and operate houses, or offer a subsidy for the construction of homes. It does mean that "the State shall be enabled to loan money on its credit to limited dividend corporations or to individuals or to organizations, to build houses of such standards, as to light and air as the State or community may determine to be desirable, the rentals of such houses to be controlled."

IT WILL BE INTERESTING to observe the manner in which the State of New York will extricate its citizens from the housing conditions into which they have fallen, without granting a subsidy. Even Holland, perhaps the most advanced nation in the world in relation to housing, where her municipalities have provided for a supply of cheap land by buying it up on a considerable scale, has found it necessary to subsidize houses for some time. The subsidies previously have been divided between state and local authority on a half-and-half basis, but now the state has assumed 75% of the subsidy and left only 25% for the local authority. More than this, the Central Building Materials Supply Company, a corporation formed by the Dutch government, the cities of the Hague, Amsterdam and Utrecht, and the Association of Dutch Municipalities (of which 120 small towns are shareholders in the Central Company) has succeeded in furnishing building materials at the lowest possible prices. Even so, there still has to be granted a subsidy averaging about $50.00 a year on a small house of five or six rooms. England pays a subsidy, as has already been recorded in these columns, of from $630.00 to $780.00 per house outright. Where is there a country which

is making any progress in its housing problems without paying a subsidy? Where is there a country granting state aid at low interest which has succeeded in solving its housing shortage? Perhaps the State of New York can meet this emergency without resorting to a subsidy. It is to be hoped that it can, for subsidies are invoked only when private initiative has brought the State or the community to a condition from which private initiative cannot extricate it. They cure nothing.

Of course the subsidy might take the mild form of an exemption from taxation, as suggested at the Mayor's conference in New York City, where an official identified with one of the important money lending institutions observed that if building loans and mortgages up to $40,000 were not freed from taxation, the housing situation was "fraught with peril and disaster." But this only serves to disclose another reason why money is not available for house building. It prefers to seek investments that are tax free, such as state and federal securities, which again reveals the evil of subsidies, for the moment exemption appears in one place, money deserts other channels. It is a palliative which appeals to the investor, but which does not relieve the economic disease. In the case of housing, it does not appear that even tax exemption would very much relieve the situation, and it can certainly be regarded as no more than an expedient.

More than that, is it not also apparent that were large sums of money made available for building purposes, competition in materials would ensue and thereby again effect a raise in prices? The whole situation is full of complexities and uncertainties, and we shall not extricate ourselves from it easily or cheaply. We could very well make some careful studies of Dutch legislation, and learn from their patient and thorough methods, what the problem involves. More than that, we must learn to look at it in broader fashion. It is today a localized issue. It is really a great national question. For example, why should more people be housed in New York City? Is it to anybody's real interest that such a community should continue to grow? Is it in the interest of the national welfare? How far can we carry the desertion of the country and the piling up of the city? How many farms were deserted in New York State last year? Where did the people go? Who is taking their place as food producers? The truth is that we are creating a problem vastly greater than the housing problem when we try to find out how to house more people in centers that are already full to overflowing.

THE HOUSING PROBLEM does not begin in the cities. It begins in the country. The history of all nations tells the story with unfailing clearness. We shall not escape their calamities unless we can find some way of distilling synthetic food from the air or of translating ourselves into a foodless existence. The State of New York could well turn its attention to the small communities, the farms, the isolated sections. If it would discover—and it could, if it wished—how to offer contentment to country dwellers, it would have done itself a real service. Until it looks at the housing problem as the basis of its welfare, it can scarcely hope to do more than administer a little alleviation to the growing pain which it does not even take the trouble to understand. The temporary problem is pressing. It must be dealt with, but it is a pity that the report of the housing committee did not take cognizance of the social significance of our artificial and unhealthy urban extension. Therein lies the real problem.

"THE BASIC REASON for the congestion of our cities," continues the report, "is the high cost of land. Only the wealthy can afford to live at such a distance from our urban centers that land is cheap. As population increases, so do land values. The man of moderate means is driven into the suburbs. The poor man is forced into smaller and smaller quarters in the congested areas. * * * * The increased values of land which result solely from the fact that individuals are crowded together are of no benefit to those who create them. This land increment, in most cases, is wasted in land speculation. If the city pays for a subway to distribute the population over a wider area, the land along the subway immediately increases in value. This increment, the result of the action of the community in building a new subway and in making use of certain parts of this new territory for residential purposes, generally goes to speculators. It is charged as part of the cost of the house either as rent or selling price. This increased value that comes from the causes above mentioned is sufficient to deprive a large part of the workers of this state of the chance to get decent homes. * * * * To a great extent the problem of housing is a land problem. The influx of a population into a new area immediately augments the value of the land. The newcomers pay the increase in rent or cost of house. Any improvement in housing has the same results. Neighboring land goes up in cost. Further improvements are stopped by increased costs."

Surely it is hopeful when an official report sponsored by no less an authority than the State of New York, can begin to tell people the truth about housing.

THE LINCOLN MEMORIAL may be visited by delegates to the Convention, although the statue of Lincoln has not been formally unveiled. The work of grading and planting is proceeding apace and the

eye of the imaginative visitor will mark the lines of the long lagoon below in the placid waters of which the memorial will one day be mirrored. The retaining wall is slowly setting to its final resting place. Its foundations do not go down to bedrock as do those of the memorial itself. To avoid so considerable an expense it was deemed best to allow for settlements and later to correct any variations by changes in the masonry. So far it appears that the settlements are in almost perfect accord with the calculations and that the correction will be slight.

C. H. W.

Industry, Homes and Architecture. II

By THOMAS ADAMS*

"There is an instinctive sense, however obscure and yet inarticulate, that the whole constitution of property, on its present tenures, is injurious, and its influence on persons deteriorating and degrading; that truly the only interest for the consideration of the State is persons; that property will always follow persons; that the highest end of government is the culture of men; and if men can be educated, the institutions will share their improvement, and the moral sentiment will write the law of the land."—EMERSON.

THE ideal state of Emerson and Ruskin—one that seeks first the interests of persons and has as its main objective the culture of men—may be regarded as the ever-present ideal of all thinking citizens in our western democracies. In practice we follow as far behind that ideal today as in the day of the New England transcendentalist. But, in considering policies and in advocating reforms it is an ideal we should ever keep in front of us.

In the first† article on this subject it was submitted that the defects of our social and industrial organization were the outcome of the too-general acceptance of false economic standards and the absence of moral sentiment in the domain of government; that cooperation, or what Emerson called the union that is "ideal in actual individualism," was the safe anchorage to be sought for the ship of industry, now storm-tossed in the waters of competition and menaced by destruction on the rocks of ultra-socialism; that the problems of housing and industry in democratic communities could only be effectively solved by government leadership in extending opportunities for cooperation and in controlling property in land. It is necessary to develop the argument a little further to indicate what is meant by the control of land in relation to industry, homes, and architecture.

Land and Industry

We are accustomed to think of land as the source from which we obtain all necessities of life, and of human energy and skill as the means by which we convert the products of land to human use. For instance, land grows food, wool, and lumber and provides brick, earth, and mortar; while the arts and manual labor of the husbandman, lumber-jack, the and the lime-burner harvest these things for the benefit of themselves and others. To the most primitive mind this connection between land and primary production is clear.

Under modern conditions of society, however, the production of raw materials from the land is only a half, or less than half, of the industry of a country. The development of manufacturing machinery, and the consequent creation of the factory and the city, has made it difficult to follow the connection between land and the various graduations of production, manufacture, and distribution. While it is easy for us to see the connection between land and wool or cotton, it is not so easy to follow its continued connection with production through all the processes of manufacture and distribution as clothing. Yet the efficiency of these processes may largely depend on the proper location and cost of site of the manufacturing plant; on the character of the means of communication; on the health and spirit of the workers in the plant and, therefore, on their homes and surroundings; and on many other things, all of which, in turn, depend on the way in which land is planned, developed, and controlled.

The Objective of Communities in Controlling Land Development

It should be the objective of progressive communities to plan, develop, and control land for use as an instrument of production. If this is done, health, order, and amenity will result in large measure without conscious effort—since nature demands attention to these three things as a means to secure greater production. The failure of much so-called town-planning is due to attempts to superimpose conditions which nature demands to promote health, order, and amenity on a weak, artificial foundation of land development that has no regard to these conditions *ab initio*. If we begin from the beginning with the right object in view, that object will be largely achieved by natural evolution; if we begin with the wrong object, or with no object, our ener-

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†December, 1919.

gies will be spent in restricting the worst effects of bad conditions that will follow, and no opportunity will be left for the designing of what is good. Land development may be called the root of the tree of structural development. If the root is unsound, the branches can never be made healthy by trimming. We must begin our town-planning with the proper cultivation of the root, and a great deal of our artificial treatment of the subsequent growth will be unnecessary.

Lack of Community Control to Blame for Injurious Speculation

The failure of a community in having the right objective in the development of the land is, in effect, as bad as having a wrong objective—because the absence of any good social objective leaves the way open to individuals to pursue a series of selfish ends, in conflict with each other, with aggregate results of injury to themselves as members of a community. In any case where the object of a community is not to develop land, definitely, in the interest of health, order, and amenity, then the individual is free to speculate in values given to land by the unhealthy use of it. Then arise the monsters of vested interests in slums, in congestion, in disorderly industrial development, and in the possession of power to destroy the beauty of natural features. Much is written with regard to the evils of land speculation. Land speculation cannot be inherently wrong so long as men must buy and sell in the expectation of gain; and with equal chances of loss and gain. What is certainly wrong is that the object of speculation should be promoted by any given system of land development, or that the want of control of land development should permit speculation in improper uses of land. Subject, for instance, to the limitation that land could not be overcrowded with dwellings to the injury of health of the inhabitants, or of the amenity of a district, there is nothing wrong in buying and selling such land for dwellings, so long as private property in land exists. The bad effects of speculation in land are caused by the failure of communities to regulate the use and prevent the abuse of land.

It is in proportion as the ownership of land carries with it the right to limit the provision of reasonable air-space and sunshine, and to prevent the freedom of movement of persons in a community, that it is bad ownership. It is also in proportion as individuals may profit from such unwholesome limitations, and speculate in the money values they produce, that speculation is bad and wrong. It is therefore the sin of omission on the part of the community if it does not prevent that improper or unhealthy use of land which is responsible for the evils of bad development—not any sins of commission on the part of the land speculator. We have already seen that the same statement applies to industrial housing—and that it is the public authority and not the employer of labor who is responsible for good or bad housing conditions. Thus, the whole problem of land, housing, and town-planning development becomes one of better local government. Better local government, however, can only be obtained in a democracy on the basis of education of the governed. The first object to be sought in promoting a sane and healthy system of land development and industrial organization is thus to educate the people—and the first step toward the achievement of that object is to educate those who lead the people.

The Need of Education Greatest in Democratic Countries

In this matter of adequate control of land development in the interest of health and orderliness in industry and home, we have at least one thing in respect of which the western democracies have seemingly made no progress in comparison with the more advanced of the feudal nations of Europe. The greater freedom given to the mass of citizens in democratic countries to acquire ownership in land has perhaps mitigated against rather than encouraged the application of sound principles of development. As against the great social benefits derived from the extension of home ownership there has unfortunately to be put the fact that the cities and towns that have the largest ratio of owners of land to population are frequently the most sluggish in promoting necessary public improvements and in permitting the restriction of their property rights. In such cases the owners, as taxpayers, have to weigh in their minds the known factor of immediate cost with the unknown factor of the value of any scheme of improvement; and even when the latter value is apparent to them, if they are not satisfied that their personal benefit is proportionate to their own contribution, they are likely to oppose the scheme. The person of average intelligence is not able to visualize the ultimate social value of controlling land, but is apt to greatly magnify the immediate effect of such control in restricting his imaginary rights. Education is the only means by which we can raise the average standard of intelligence on this, as on any question, and in a democratic country education is a slow process because it has to reach the mass of the people.

A Scientific Foundation Needed for Land Development and Town-Planning

But it is apparent to the student of land development in town and country that before the education

of the masses can be begun there must be a science to teach and men to interpret the science. What is the extent of our equipment in the science of development of land for purposes of industry? We have a growing literature, and there has been much uncoordinated study and experiment in city- and town-planning. Some of the universities are nibbling at the subject, and a group of specialists is emerging from the architectural and engineering professions. On the whole, however, we have only the beginnings of a science and no adequate scientific equipment. It is generally recognized that the study of underlying conditions must precede the preparation of a plan of a city, but to many this consists of merely studying the existing physical conditions of the locality to be planned. Something deeper and wider than that is needed for purposes of scientific investigation and for arriving at settled principles. The social and political aspects of land development and industrial organization as a whole need to be investigated and analyzed.

What we want in relation to land development and town-planning is what Huxley describes as the "growth of knowledge beyond imaginable utilitarian ends which is the condition precedent of its practical utility." Huxley was writing of the progress of science in relation to the processes of manufacturing industry. He referred to the awakening of the captains of industry to the value of science and continued:

"It has become obvious that the interests of science and of industry are identical; that science cannot make a step forward without, sooner or later, opening up new channels for industry; and on the other hand that every advance of industry facilitates those experimental investigations upon which the growth of science depends. We may hope that, at last, the weary misunderstanding between the practical men who professed to despise science, and the high and dry philosophers who professed to despise practical results, is at an end."

It is true that the practical men have become convinced of the value of science within the factory; it is also true that they still despise science in relation to the urbanized social organization which industry has created outside the factory. Yet science is as much needed to build up that social organization as to develop the mechanical processes of industry. When the captains of industry are sufficiently awakened to that need we shall have more reliance placed by them on constructive methods of land and town development, on promoting healthy living conditions in home and factory, and on the application of preventive measures to social evils as a means of raising the standards of civilization.

But the education of the captains of industry, the politician, and other leaders of men must be preceded by further education of those who practice the art of city- and town-planning particularly in the investigation of the underlying factors that have to form the foundation of city- or town-planning as an art. Whether our problem is to build a new city or to replan the building of an existing city, we must have regard to control of land—and to the principles that constitute its proper use for health, order and amenity. It is these principles—and not the so-called principle of expediency, as Mr. Ackerman has said—that should guide us in the practice and policy of city-planning. They are the principles that in the long run are sound from the point of view of practicability, as well as of ethics, for they conform to the demands of nature—and nature is a tyrant whose law we cannot despise with impunity.

The art of city- and town-planning is being developed in our schools of architecture and landscape architecture—but without adequate scientific data as a basis. Until we know more of the underlying facts and their mutual relation, we shall continue to draw conclusions from wrong premises and waste much of our time and energy. The research that is needed cannot be undertaken without large funds. Extensive regional surveys need to be made in all areas of special character, and particularly in industrial areas. We need investigation of:

(*a*) The origin, working and results of different systems of land development;
(*b*) The proper or improper forms of zoning or classification of industries and residences;
(*c*) The relation between industry, dwellings, and transportation;
(*d*) The tendency of manufacturing plants to penetrate new areas and the problems thereby created;
(*e*) The best economic uses of land in given localities;
(*f*) The standards needed to govern the character and density of structures for different purposes;
(*g*) Housing—comprising sanitation, convenience to places of employment and amenity;
(*h*) Forms of transportation;
(*i*) Sources and forms of distribution of power;
(*j*) Water supplies and sewerage schemes in relation to regional areas as distinct from arbitrary local areas;
(*k*) General amenities,—parks and boulevards.

The rational order in which these things should be studied and the geographical limits of areas is a matter for preliminary consideration. The immensity of the problem is indicated by the above short summary, but the importance of dealing with it in a comprehensive way, in spite of its size and complexity, is proved by the futility of the results achieved by the practice of city-planning in separate compartments, with too much regard to expediency.

State Legislation

The mere setting up of planning commissions in cities will not go far to achieve effective planning and control of development. State legislation, to give adequate power to local councils and to facilitate cooperation between councils in adjacent areas, and state assistance in making comprehensive regional surveys are needed. There is no necessary power required for city or regional planning that cannot be given to local authorities in America, subject to joint action of the state and the local authorities. Nor is there anything objectionable in the state legislation needed for this purpose, or in the joint action which is desirable, to the advocate of more local autonomy.

Land cannot be effectively controlled without special state legislation—nor without means to permit and even to enforce some form of joint action of incorporated bodies in regional or metropolitan areas. Special powers are needed to enforce any scheme effectively; to secure for the community part of the increased value given to land or buildings by the making or execution of a scheme; to make zoning regulations permanent and elastic and not capable of being overridden by the caprice of changing personnel of local councils; to acquire land compulsorily without cumbersome or expensive procedure, including land in excess of what is needed for a particular improvement; to do all things necessary *according to modern standards*, for health, safety, and injury to private rights—that are in conflict with these things; to prevent building on unsuitable land and to classify such land for reclamation, agriculture, parks, or other purposes.

In the subsequent preparation of schemes, comprehensive areas should be chosen, no new subdivision of land should be permitted within the area unless where approved by a city-planning commission, and, where possible, the commission should cooperate with owners of land to obtain a revision of existing subdivisions that are not properly planned.

Stabilization of Real Estate Values

City and town-planning should stabilize real-estate values, and there is nothing objectionable in their doing so. Injurious speculation in land and profit-making in forms of abuse of land will be prevented, but the general stability of land ownership will be improved. The real-estate shark is the worst enemy of a sound system of land ownership as well as of land development. Any revision in the system of taxation should be designed with the object of promoting good development rather than punishing bad development, or destroying ownership under proper conditions. Bad development should be prevented. As I have stated elsewhere:

"The planning of land for right use and development should precede any taxation reform so that the tax would have some relation to the use to which land was to be put in the same district; whether, for instance, it would be used for building skyscrapers, or workmen's dwellings, or for growing fruit or vegetables."*

The assessment of land for purposes of taxation should also have a relation to these uses and should not have the effect of sterilizing or forcing the subdivision of agricultural or nursery land within or adjacent to municipal boundaries. The community value given to the latter can be collected in bulk when its conversion to building use takes place, without real injury to the owner.

Architecture and Control of Land Development

Order in planning land postulates order in buildings. Architectual incongruities in cities are more often than not the indirect results of bad beginnings in land development. The architect, professionally as well as a citizen, is interested in securing a sound system of land development, implying as it does the control of the use of land for health, order and amenity. It is erroneously assumed by some that the interests of the architect in city-planning are confined to the design of the buildings, and that all surveying and engineering work in connection with the plan can be completed before the architect is called in to take part. No satisfactory plan of land dealing with the street system, the lot subdivisions, the building-lines and densities, the classification of land for different purposes, can be prepared by any person or group of persons however skilled, unless they have the capacity to visualize the structural development to follow the plan.

In the absence of an architect in the group of specialists preparing a plan, there should be someone having vision and artistic feeling and some degree of knowledge of architectural forms to adjust the plan to suit the completed development. The safer thing is for the architect with town-planning sympathy and training to be one, if not the dominating figure of the group,

The architect is a creator of buildings according to plan. The utility as well as the beauty of the structure he creates depends, not merely on its form and the correct proportion of its parts, but also on its conformity to purpose and natural laws and its harmony or propriety with its surroundings. An architect engaged in building in a city, town, or village must also be a town-planner, for he is creating

*"Rural Planning and development," p. 124.

a part of a community structure. No matter how able he may be in his art and dominant in his personality, he is the slave of natural law. His freedom of expression is limited by nature.

Being the slave of nature himself, he should not be required to compromise with artificial conditions of land development that are laid down for him by others who have ignored nature. What is meant here, as already indicated, is not merely the physical conditions of nature, but the conditions imposed by nature as the price of health and amenity. When a surveyor or landscape engineer prescribes the layout of land in some rectangular, radial, or other geometrical form, without regard to either topography or human purpose, he is creating artificial obstacles for the architect as well as for the engineer and the community. The architect cannot overcome these obstacles; he has to make compromises with them. He may design houses to look well on lots 25 feet wide and with adequate provision for air-space and light, but here again he is compromising with artificial limitations that are imposed by others without adequate reason, except that of facilitating profit-making out of the sale of the land or that of suiting an engineering or landscape purpose that has no regard to structure of buildings. The architect has therefore a duty in connection with the control of land development and an interest in promoting that control. The real foundation of his structure is not the piece of land on which he builds, but the general system of laying out the land for industries or homes.

It is not so essential that the architect be the town-planner as that his opportunities to comply with natural law, and have freedom of expression subject to that alone, be not restricted by artificial limitations imposed by any plan of the land. His own compliance with that law should not be hindered by non-compliance with natural conditions of those who plan the land.

Nor should the architect himself forget that when he becomes town-planner he has to become a dual personality. As architect of a building he should have freedom to express himself and to pursue his own ideals as an artist; as town-planner he has to express not himself nor his own ideals, but the purposes and ideals of the community through himself.

Finally his share of responsibility for laying a saner and more scientific foundation for the development of industry and homes depends, with him as with all, on the knowledge that is power.

Ancient Cottages and Modern Requirements.

WITH AN ARCHITECTURAL OPINION FROM Mr. BERNARD SHAW.

Under the above title, the Royal Society of Arts recently listened to a paper by Mr. Alfred H. Powell and then joined in a discussion of the subject. Both were very interesting; they exhibit a deeper knowledge of and affection for the domestic architectural achievements of England than one is apt to find in either reading or listening to the modern house reformer. They offer pleasure and refreshment to those who are bored to extinction with laws, standards, and the dreary list of inventions, devices, and expedients, put forward as a solution of the so-called housing problem. Both the paper and the discussion reveal—it may be only a dying gasp—the possibilities that should lie in house building and home making as healthful outlets for mankind. The world, in its blundering frenzy about a problem which it is too lazy to analyze and understand, is in serious danger of forgetting why we have houses.

Said Mr. Powell: "One thing appears very clearly at the outset, that, whereas the new houses will be just new houses, the old ones have for many generations been *homes*. However well, however thoughtfully we architects go to our work of housing, however nicely planned and outsided the new houses may be, they cannot all at once become homes. It takes long association and use to make a house into a home, and age, which is the reward of wise building, is the perfection of architecture."

"There is, perhaps, no country in the world that can show in so small a space as England so great a proportion of ancient cottages, well built and beautifully gardened, and still in wonderful working order. . . . We who live with them always and see them daily may easily come to take them as a matter of course. . . . Often during these years of the war I have thought of soldiers and sailors scattered over the world in all kinds of difficulty and danger, and felt how strongly must the thought of these ancient homes have upheld the courage and steadied the faith of thousands.

"Another point we may bear in mind in considering the possible fate of old cottages is that our modern architecture, in spite of all the pains we architects take, is not a popular art with a real message to the people, and the host of new buildings in all our renewed towns and cities practically passes without notice or comment; they are buildings innocent of power to move our hearts—they have little food for the spirit. But with ancient buildings it is not so, and I do not think this is entirely due to their being ancient. . . . The deeper reason for this is no doubt unrecognized in a general way, but whereas new work of our time is bound to be the result of individual effort in a sophisticated age, ancient and medieval building was democratic in the sense that it made folk-speech. The common energy of men ran to fine building and the arts, and these became under their hands a language very widely understood by the whole people. . . . I cannot refrain from asking if it may not be this that is at the root of our present labor distress? From our work there has departed something that we recognize as present in the work of the old builders. We see that their work was able to give them a life within a life, a poetic edge upon all effort. In a word, work

appealed to them because it tapped the springs of invention and conscious enjoyment, so that through all their continual struggle for social recognition they kept on making things that still fill us with a pleased wonder. In their buildings, as Professor Lethaby tells us, there was magic even to their makers. I am convinced that by workmanlike consideration of old work, by close looking at the actual substance and form of it—not as critics, still less as imitators, but as interested to the point of doing it, in all work well done—we might learn a new ideal of work and see it as the rational and sufficient outlet for all human activity. . . . All the arts are sprung of use, and are thereby the most direct guides to the long story of the use of houses. . . ."

"As to defining a cottage I find little help in the dictionaries, but if I were asked for a definition I think I would call it a building whose main purpose was to be convenient for workers and work—so small as to be in constant touch with the out-of-door world and the elements—by no means a place to be idle or ill in. . . . In thinking of the outdoor workers' attitude towards a cottage of this kind, I always call to mind the words of an old carter I once knew in Surrey. We were talking about two old men, well known in all that county (one was called 'Uncle' and the other 'Teapot'—I never heard any other name for them), men whom we should call tramps, but whom I always found ready to be helpful if wanted. I asked him where they lived, for I had seen them at tea in a neighboring ditch that afternoon with a kind of tent thrown over the hedge to protect their fire. He answered, 'Oh, they never use no houses, you know.' Before that I had never thought of a house as a small object to 'use', and I felt the precarious nature of a cottager's life in a new way."

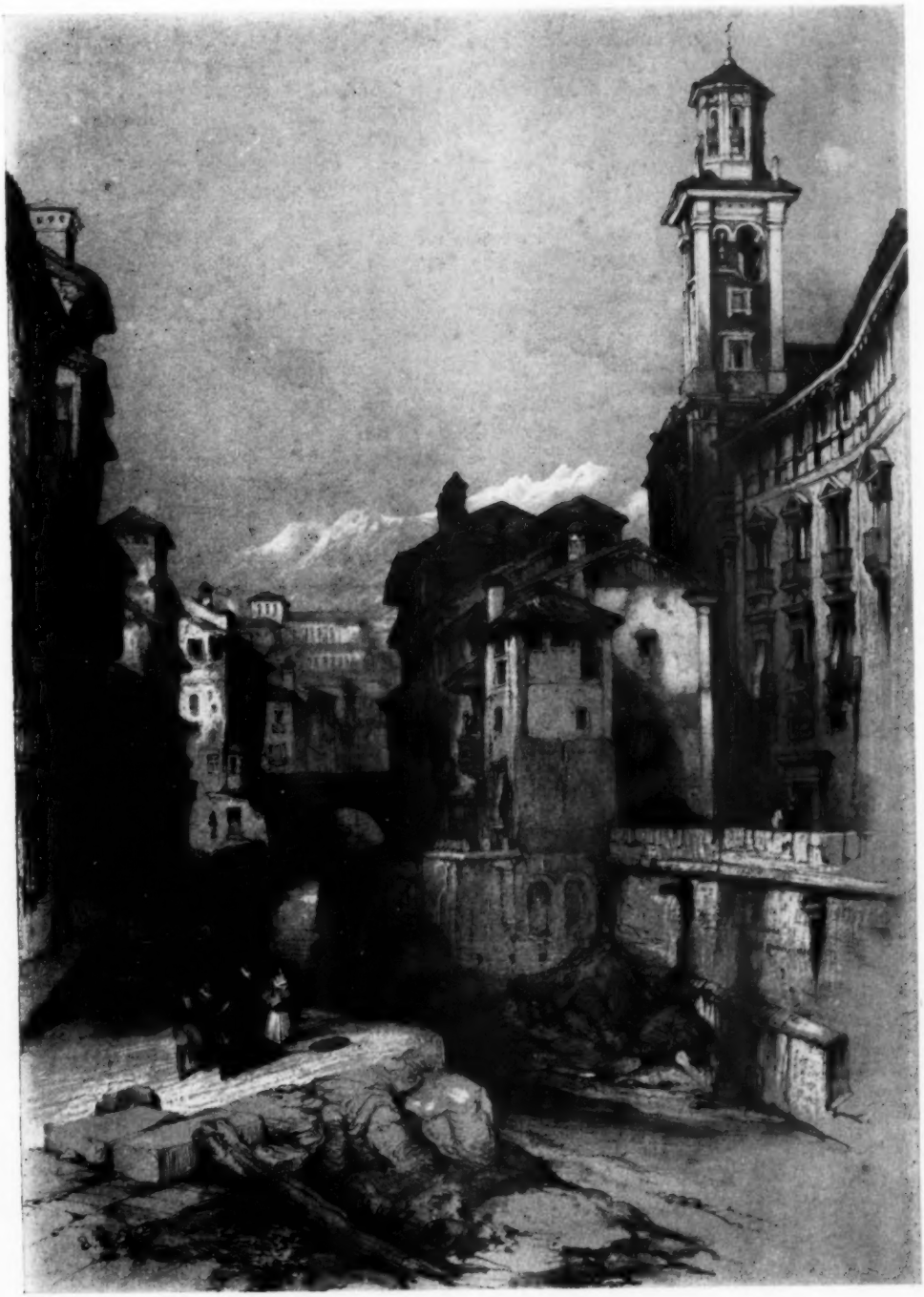
Mr. Powell went on to discuss many of the problems involved in the preservation and alteration of old cottages and concluded his paper as follows: "My plea for ancient cottages is bound up with the thought that they are the places where England was made, the homes of all country handicrafts, the explanation and the history of the people, an object lesson for our own time in simplicity of life and straightforward building that has been the basis of England and English life through so many centuries. It is surely no small part of English history that here in these humble dwellings has grown up the knowledge of all agriculture and all building. No one can say from what remote antiquity this knowledge came, but we need to remember that it was only serviceable to workers, in their doing of work, only indeed comprehensible to them as rules of work."

Mr. Bernard Shaw, opening the discussion of Mr. Powell's paper, said: "He was not sure that a great deal of mischief had not been done within his own lifetime by building which was purely literary and nothing else. He had lived in some literary buildings, and had felt intensely relieved to go back to an eighteenth century house, a sensible sort of house made by simply putting a number of rooms together and making a passage by which to enter them. The literary and artistic house—a place where everything was made as dark as possible, where there were as few windows as possible, and as much of those windows as possible was filled up with lead—in which one lived with an exalted sense of its artistic qualities, was really a sort of architectural hell. He had come to the conclusion that what is wanted is a law that every building in this country shall be knocked down at the end of twenty years and a new one erected in its place. Of course that would get rid of the old cottages; but what right had the people of this country to possess old cottages? One of the reasons why so much of our building work was bad was that we had got into the habit of sponging on the past. People made a tremendous fuss about the destruction of cathedrals, such as Rheims; but in a competent state of the arts and crafts the sensible thing would be to get a new cathedral and stained glass, and do the whole thing over again, and see if it could not be done better. If we were a genuinely active people, producing decent habitations and decent art, it would be very hard for an old building to keep alive. An architect in the fourteenth century regarded a Norman cathedral simply as a building out of which he could hew something perfectly new. Personally, he had all his life had the feeling that every generation ought to be able to produce its own art, and that the worship of the past that people of the present day had been driven into was a disease that could be cured only by the wholesale destruction of all the monuments of the past, so as to force us by a kind of starvation to produce our own art. People tolerated ugly buildings and ugly surroundings, and then during their holidays went to look at a beautiful old house as something unique. It was certainly pleasant to look at some old English villages and cottages; but what a horrible thing it was that a pretty cottage or village should be a spectacle which people travelled a long distance to see? It ought to be a matter of course, so that no single person in the country should look twice at a decent cottage. If the wholesale destruction of human beings involved by war could be avoided he would be glad to have a dozen wars, so that all old buildings could be destroyed and replaced by new and perhaps better ones."

The chairman pointed out that "Mr. Shaw, the destroyer and Mr. Powell, the preserver, were in a way very much akin, because they both looked at the matter from the human end. Mr. Shaw's remarks were simply a paradox by which he wished to emphasize that we had got to do really good work at the present day. The moral of most of the remarks made at the meeting was that a cottage was a good thing when it started at the human end. If a man tried to build something which was artistic, he only produced something artistic, and it had no really permanent value about it at all; but if he started at the human end, and his aim was first and foremost to make a home for a person who deserved one, he would make a really good home."

Such simple truths, pointing as they do toward a restoration of art by the enfreeing of workmen, and toward the creation of homes through the pleasure of building them, are quite refreshing in the midst of so much barren waste of speech about "art," "housing," and "educating the public."

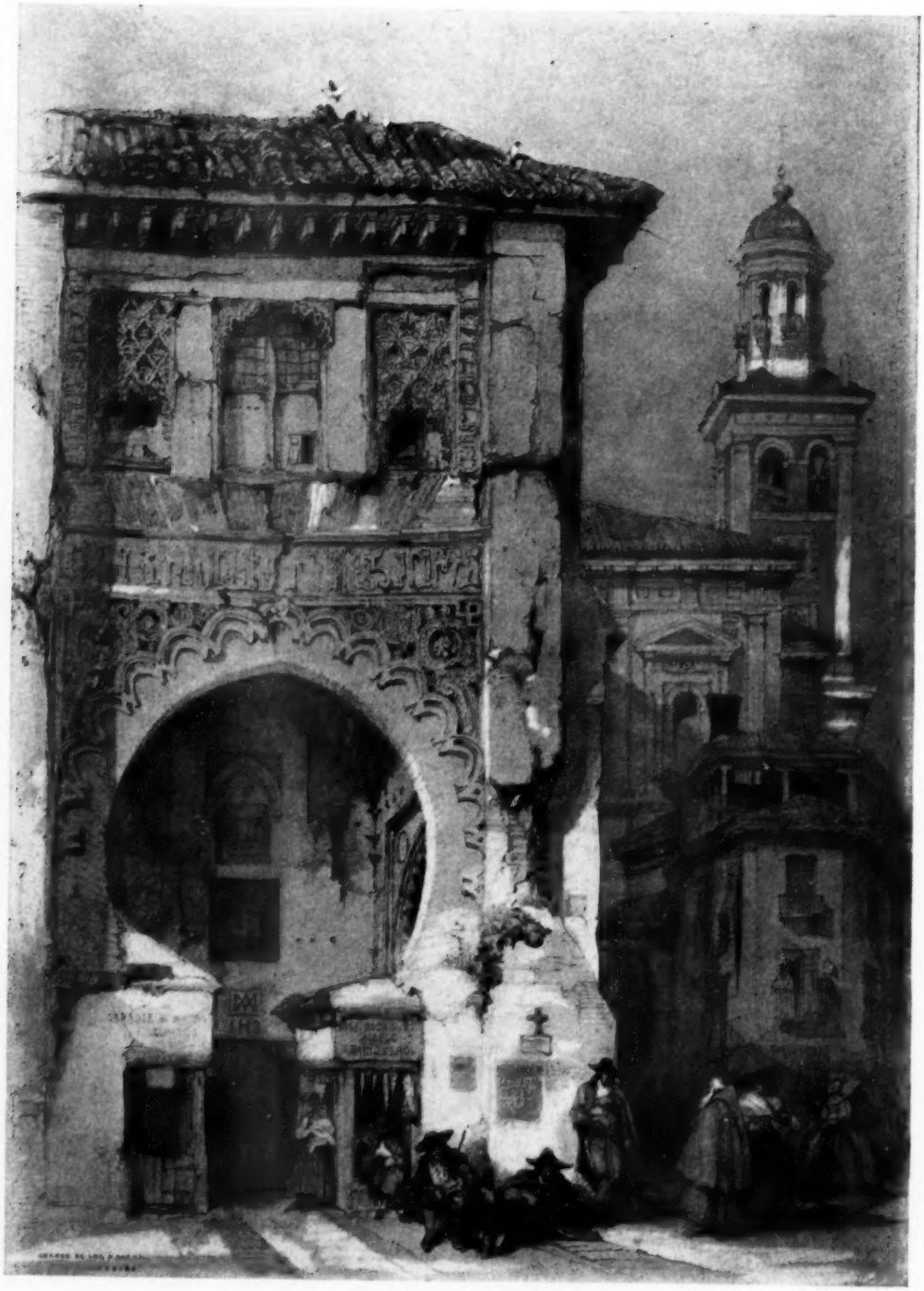
It is interesting to know that the Society for the Protection of Ancient Buildings has taken active steps to preserve the ancient cottages of England by offering to repair them at a cost of a hundred and fifty pounds or thereabouts. It has addressed a memorandum to that effect to the Ministry of Health.



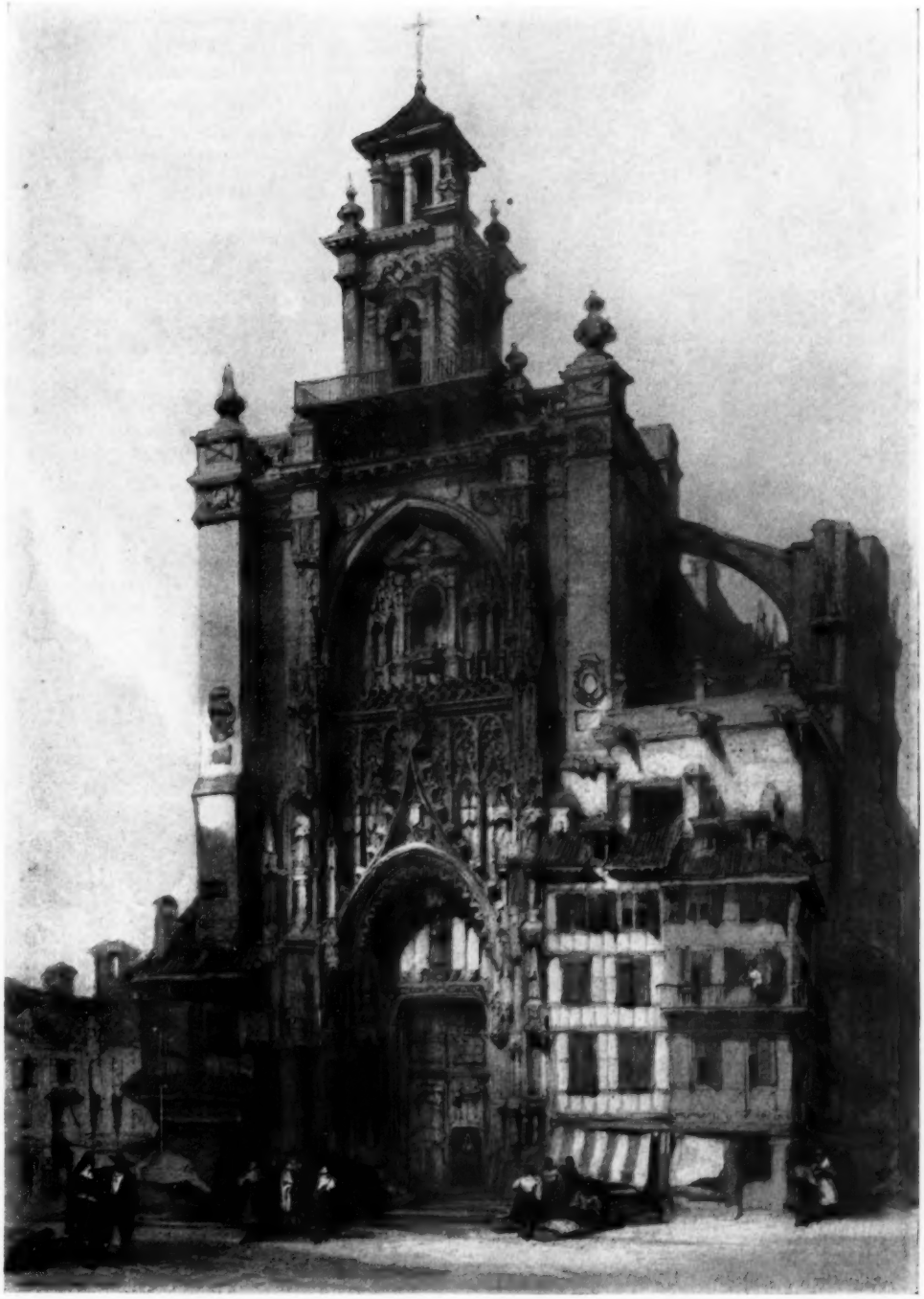
Old Buildings on the River Darro—Granada
After the Lithograph by David Roberts

PART OF THE CATHEDRAL—BURGOS
After the Lithograph by David Roberts

The Giralda—Seville
After the Lithograph by David Roberts



Correo de los Morros—Granada
After the Lithograph by David Roberts



Church of San Jaco—Xeres
After the Lithograph by David Roberts

GATE OF THE WARRAMBLA—GRANADA
After the lithograph by David Roberts

The Question of State Societies

In the following communications to the *Journal* the subject of State Societies is presented by Messrs. F. E. Davidson and Charles St. John Chubb, members of the Institute, together with resolutions adopted by the Minnesota Chapter. These are presented and made available to the delegates to the Fifty-third Convention as having an important bearing upon the subject there to be discussed.—*The Editor.*

Mr. Davidson's Argument

A review of the efforts in recent years to increase Institute influence by an increase in Institute membership will disclose that notwithstanding the operations of the revised Constitution of the Institute, approved at the Minneapolis Convention, which provided for a new class of membership known as Associates of the Chapter, in addition to the special drives for new members conducted by the past two Institute Administrations, the increase in Institute membership hoped for and expected has not been secured.

This result was foreseen by the Illinois Chapter, which after careful and mature deliberation finally approved and presented a resolution to the Board of Directors of the Institute previous to the Nashville Convention in which was suggested the importance of having the Institute interest itself in the formation of State Societies of Architects in order to extend Institute influence. This resolution was adopted by the Convention. The resolutions submitted by the Illinois Chapter relating to State Societies were as follows:

> "Whereas, there are now organized in several states in the union State Societies of Architects, the object of which is to promote the business interests and efficiency of its members and generally admitting to membership all honorable practicing architects of their respective states, and some of whose objects are identical with or similar to the objects of the American Institute of Architects and its Chapters, which societies are worthy of the respect and assistance of and co-operation with the American Institute of Architects; and,
>
> Whereas, the work of the several Chapters would be more effective in local professional, industrial and public affairs if they were in closer reciprocal relations with these State Societies and other such organizations; and,
>
> Whereas, the American Institute of Architects would be more representative of the architectural profession and more influential in national affairs if it were in closer co-operation with such organized architectural bodies outside of its present membership.
>
> Therefore, be it resolved, that the Illinois Chapter of the American Institute of Architects recommend to the Fifty-Second Convention of the American Institute of Architects, that the Board of Directors of the Institute be directed to encourage the organization of state architectural societies and invite such organizations to be represented at the National Convention of the American Institute of Architects, with such status as the Board of Directors may determine, and to maintain correspondence with the Secretary or other officer designated by these societies; and,
>
> Be it further resolved, that the Illinois Chapter recommends to the Fifty-Second Annual Convention that the Board of Directors be instructed to encourage Chapters of the American Institute of Architects to cooperate with such state societies and local organizations engaged in the promotion of the arts and industries allied to architecture."

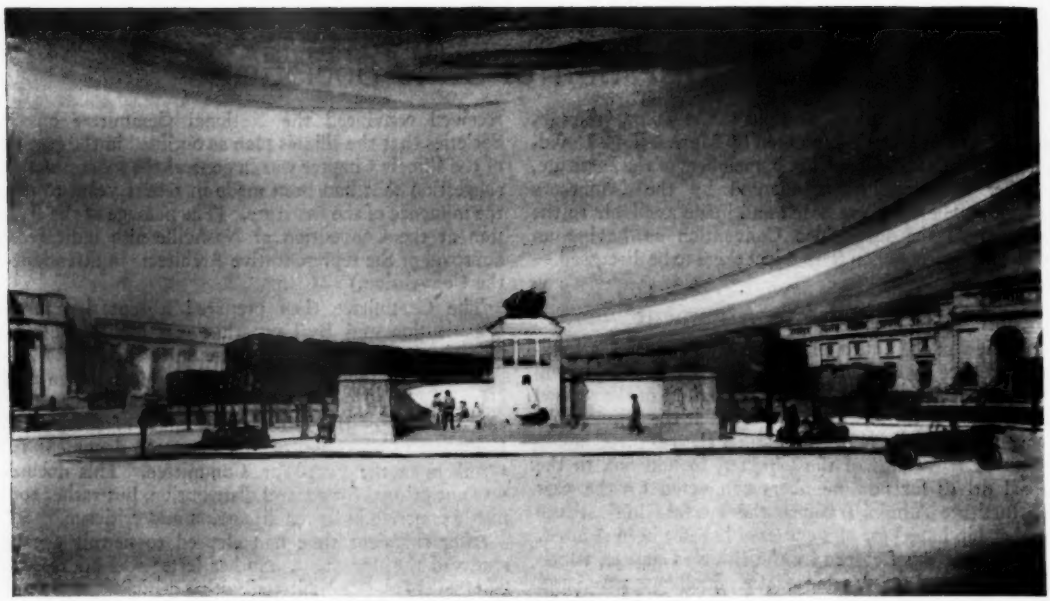
After the organization of the Post-War Committee, following the National Convention, that Committee determined to learn, if possible, whether the profession throughout the United States, as represented by the Post-War Committee, held similar views to those expressed by the Illinois Chapter resolution. A questionnaire was prepared and sent to each member of the committee. The replies received convinced the National Committee on State Societies that the Illinois plan as outlined in the resolution of the Illinois Chapter was in general the most practicable suggestion that had been made in recent years to extend the influence of the Institute. (The passage of the Resolution at the Convention at Nashville also indicated the approval of the representative Architects in attendance at the Convention.)

The Committee then prepared a tentative form of Constitution and By-Laws that was modeled after the Constitution and By-Laws of the State Societies of Michigan, Indiana, Iowa and Illinois, these having been proven workable by the experience of time, and after securing the criticism of the Executive Council of the Post-War Committee sent copies of this suggested document to all members of the Post-War Committee. This document was not printed for general distribution, but rather to furnish a concrete basis for discussion and criticism.

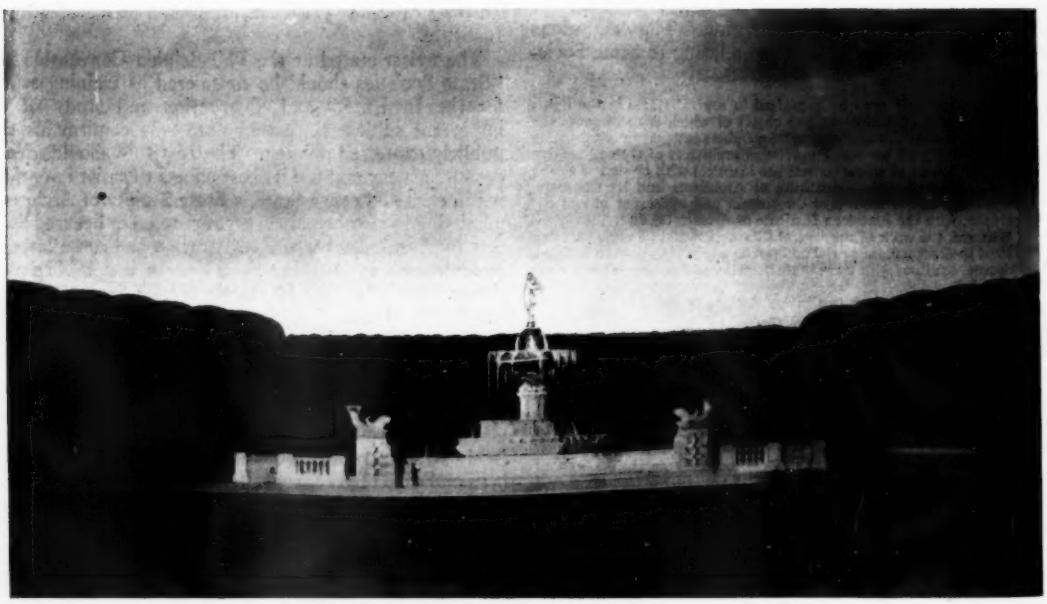
After sufficient time had elapsed to permit a careful study of the document, another letter was addressed to members of the Committee inviting criticisms and suggestions, and from the entire membership of the Post-War Committee only two members offered constructive criticism. It may, therefore, be reasonably implied that in the opinion of the members of the Post-War Committee, State Societies are desirable and should be fostered by the Institute.

The writer stated at the Philadelphia Convention that "State Societies should be considered as training schools for the Institute," and observation and study of this important subject since that date only confirm his then publicly expressed opinion. The Institute should give its encouragement and use its best efforts to assist in organizing in each and every State, a State Society of Architects, admitting to membership every registered or licensed architect in those States where registration or license laws are in force, and in all other States every honorable practitioner. (It is recognized that in certain States, owing to peculiar local conditions, it may be inexpedient to encourage immediate action—but ultimate action should be a result to which to look forward.)

It seems also to be desirable for the State Societies to provide an Associate Class for Architectural Draughtsmen and Superintendents. Let each State Society be absolutely self-governing. Let it write and adopt its own by-laws and code of practice, suitable to its own special needs. Let each Society establish its own standards of professional conduct, scale of fees, and other procedure. Let each and every member of the Institute in the several States join these local State Societies and by their influence and example become to their brother practitioners a "shining light." Let the Institute invite all State Societies to affiliate with it as Societies, allowing each State Society representation at the Annual Conventions in proportion to its membership, but providing that every society so affiliated shall pay to the Institute a per capita tax on its membership. Delegates from the State Societies should be permitted to vote on all questions at the Conventions



First Prize—Adiel Martin Stern.



Second Prize—Sigmund J. Laschenski.

The Cope Memorial Prize Competition—1920. Conducted under the auspices of the T-Square Club, Philadelphia. The program called for a municipal comfort station of stone, decorative in character and following classic precedents. The members of the jury were Messrs. Leicester B. Holland, Milton B. Medary, Jr., and George Howe.

except strictly Institute business. Permit the State Societies to honor any of their members who may have rendered some conspicuous service to society or to the profession by nominating them for election to Institute membership. Make membership in the Institute an honor to be sought after as well as a license to serve society.

Let the Institute ever jealously guard its good name by at no time ever lowering its standards for the sake of increasing its membership, but let its standards become ever more difficult of attainment to the end that the greatest honor that may be conferred upon an architect will be his election to membership in the American Institute of Architects.—F. E. DAVIDSON.

Mr. Chubb's Argument

As a result of the deliberations of the Fifty-second Convention at Nashville a year ago, it seems to have become the proper thing to give rather widespread publicity to the ills and weaknesses of the Institute, and of the profession of Architecture as a whole. The consequent indecision in the public mind as to the status of the architect in his various relationships as designer, engineer, professional and business man, has, as a result, become even more vexed. The reason is obvious—the architects themselves have come to no agreement on these matters. It is in the hope that, at the next Convention, our own minds may be more fixed in these relationships that the following study of Institute Organization is recorded.

No doubt the self-searching inquiry of the Post-War Committee has given rise to the criticisms, constructive and otherwise, of both Institute and Profession. The pity is that these critical discussions could not have been kept in the family, so to speak, and the results only, in agreements reached, made public. The *Journal* should have been the forum of Institute members and not the architectural press, where contributed articles have inspired editorial comment ranging from how the Institute should be run, to "insidious influences" in control of the Convention. Again, the Institute has been assailed by its own members in the official organs of the State Societies. To the voyager on the ship of the Institute the Strait between this Scylla of "insidious influences" and Charybdis of "destructive criticism" has been reached; and he will sail through safely at the Convention, for our Scylla and Charybdis are myths, as of old. They are but the familiar "conservative" and "radical" of all organized society, and each will give and take at the decree of the majority of Institute voyagers. They are both necessary; the one to produce growth, the other to conserve strength. We must therefore cease calling the one "insidious" and the other "destructive."

The Institute and the practice of architecture as a result of the studies of the Post-War Committee are going through a process of reorganization. The work of the Committee has been for great good. Some of its conclusions will of course be debatable, but they will be for the delegates of the Convention to decide, and decisions will not be prevented or reached by "influences that have been so insidiously in evidence in the past," as is charged editorially in one of our weekly architectural publications. The Institute membership is competent to reach its own conclusions without the aid of that publication.

A glance back through the lists of past Institute Officers does not suggest a cause for changing our method of organization in that respect. That there has been a "failure of the Institute to keep the profession prominently before the public eye" is no doubt true, but that is not the object of the Institute as expressed in its Constitution. The Institute is not an advertising medium for its members. Its expressed ideals are above the modern conception of business and industrial efficiency and of limelight publicity.

The officered organization of the Institute is designed to serve its members in the Chapter organizations by promoting their professional advancement. It can only serve society at large indirectly through its members and Chapters. If it has failed as an instrument of social service it is because its members and Chapters have failed. An architect may plan and design his building but a contractor builds it. It would seem that the critics of the officered organization desire that the officers be both architect and contractor. Again, the United States is so large that the architects' service to society in one locality must differ from that in another. Here it is housing, there it is city planning, next it is farm houses, and yet again city tenements. These problems must be solved locally by the Chapters. In the public eye, then, the Institute must be known through its members and not through its officers.

Certainly no one contends that architecture in the United States is not improving. A comparison of the work of a generation ago with that of today will show that we have made tremendous strides in plan, design, and construction. though our business methods have not kept pace with progress in these lines. Fine buildings will ever be the silent advertisement of the profession and the index of its efficiency; and who will say that the Institute has not contributed in large measure to present-day results?

In numbers, the Institute, during the past five years and in spite of the war, has enjoyed the greatest period of growth. More than four hundred new members have been added in this period as against three hundred in the thirteen years previous. Why, then, the humiliating public self-criticism?

Let us examine the charges of our critics and their proposals for curing our ills.

"What is the matter with the Institute?" asks the Bulletin of the Illinois Society, editorially, and answers that "it is not, in so far as its membership is concerned, actually representative of the entire profession. . . . As to why there has not been a greater tendency to join the Institute, the answer would seem to be very plain. It is simply because of the ultra-aristocratic attitude toward all matters pertaining to the entire field of architecture."

Mr. Glenn Brown presents the other side of this question as follows: "I believe that quality is far more important than numbers. One member of the Institute whose standing and character is a light to the country is of more value than a dozen men who are unknown or not favorably known."

One writer, then, desires greater democracy in the Institute; the other desires it to be a professional aristocracy. The former charges that the Institute is "too good" for the great body of American architects; the other that the great body of American architects is not good

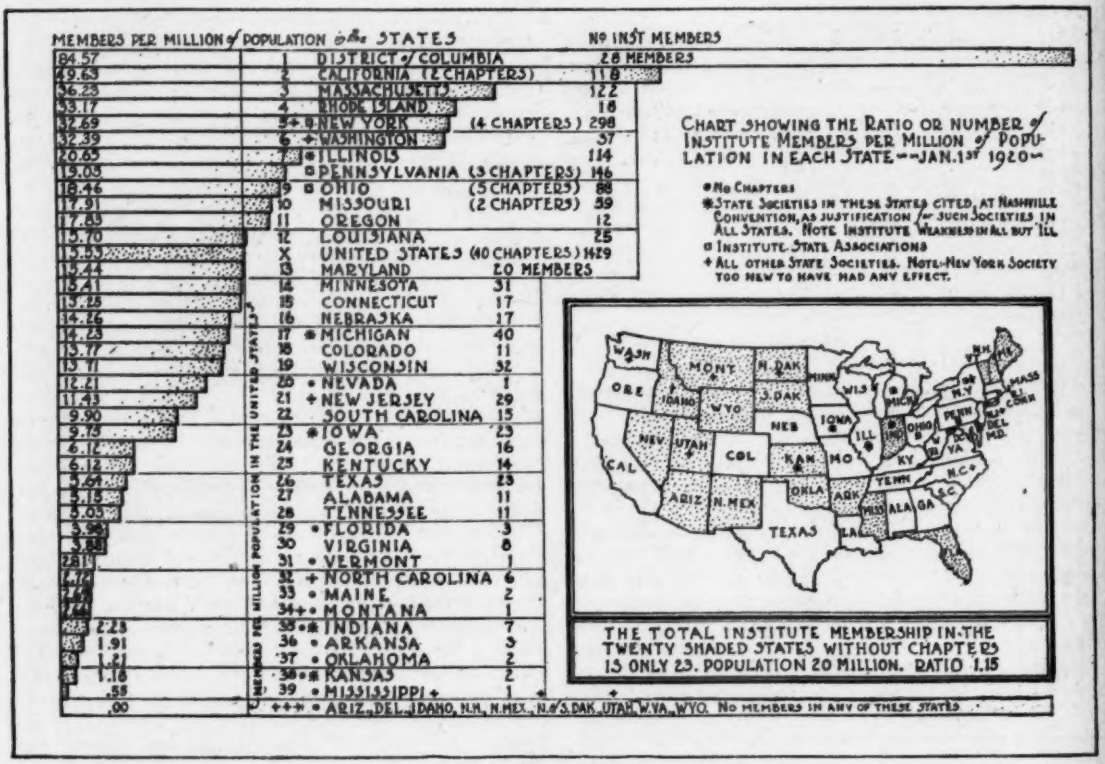

MEMBERS PER MILLION of POPULATION in the STATES
Nº INST MEMBERS
84.57 1 DISTRICT of COLUMBIA 28 MEMBERS
49.63 2 CALIFORNIA (2 CHAPTERS) 118
46.23 3 MASSACHUSETTS 122
43.17 4 RHODE ISLAND 18
42.69 5+ NEW YORK (4 CHAPTERS) 298
42.39 6 + WASHINGTON 57
20.65 7 * ILLINOIS 114
19.05 □ PENNSYLVANIA (3 CHAPTERS) 146
18.46 9 □ OHIO (5 CHAPTERS) 88
17.91 10 MISSOURI (2 CHAPTERS) 59
17.85 11 OREGON 12
15.70 12 LOUISIANA 25
15.53 X UNITED STATES (40 CHAPTERS) 1629
15.44 13 MARYLAND 20 MEMBERS
15.41 14 MINNESOTA 31
15.25 15 CONNECTICUT 17
14.26 16 NEBRASKA 17
14.23 17 * MICHIGAN 40
13.77 18 COLORADO 11
13.71 19 WISCONSIN 32
12.21 20 • NEVADA 1
11.43 21 + NEW JERSEY 29
9.90 22 SOUTH CAROLINA 15
9.75 23 * IOWA 23
6.14 24 GEORGIA 16
6.12 25 KENTUCKY 14
5.69 26 TEXAS 23
5.15 27 ALABAMA 11
5.05 28 TENNESSEE 11
3.96 29 • FLORIDA 3
3.88 30 VIRGINIA 8
2.81 31 • VERMONT 1
1.47 32 + NORTH CAROLINA 6
1.42 33 • MAINE 2
1.42 34+• MONTANA 1
2.23 35 •* INDIANA 7
1.91 36 • ARKANSA 3
1.21 37 • OKLAHOMA 2
1.18 38 •* KANSAS 2
.55 39 • MISSISSIPPI + 1
.00 +++ • ARIZ., DEL., IDAHO, N.H., N.MEX., N. & S. DAK., UTAH, W.VA., WYO. No MEMBERS in any of these STATES
NUMBER PER MILLION POPULATION IN THE UNITED STATES
CHART SHOWING THE RATIO OR NUMBER of INSTITUTE MEMBERS PER MILLION of POPULATION IN EACH STATE — JAN. 1st 1920
• No Chapters
* State Societies in these States cited, at Nashville Convention, as justification for such Societies in all States. Note Institute weakened in all but Ill.
□ Institute-State Associations
+ All other State Societies. Note—New York Society too new to have had any effect.
THE TOTAL INSTITUTE MEMBERSHIP IN THE TWENTY SHADED STATES WITHOUT CHAPTERS IS ONLY 23. POPULATION 20 MILLION. RATIO 1.15

FIGURE I.

enough for the Institute. In a sense both statements are the same, so both writers propose the same remedy, that of encouraging the organization of State Societies. If aristocracy is desirable the reasoning is sound. If democracy is desirable the reasoning is unsound, for if lack of democracy is the Institute's malady, the cure proposed is that of inoculating another "body" with the serum of democracy. Usually, when one is sick, the serum is injected into his own system, and that is what the Institute needs. In other words, let us democratize the Institute by democratizing the Institute, and not by organizing democratic State Societies. The latter action can only make the Institute more "Ultra Aristocratic"—if *ultra* can be *more*. Is that what either writer, or the Institute, really desires?

Democracy in the Institute

As long as the Institute sticks to its present standards and remains a body of the aristocracy of the profession, there is room for another kind of architectural society. Adhering to present standards, however, is exactly what the Institute cannot afford to do; for the "standard of practice" is variable in each community. That the standard of practice is of greater competence in great centers is not debatable. There are better architects in Greater New York, Boston, Philadelphia and Chicago than in a city of Kansas. The Chapters in these four great centers constitute nearly forty-two (42) per cent of the total Institute membership. Is, then, the Institute truly the *American* Institute? Who is to fix the professional standards of the Institute?

We cannot create a yard-stick that will measure professional ability and standardize it for all sections of the country. What standards are we going to accept as a basis for Institute membership? If it is to be fixed and measured by the standard in the great centers, then it would seem that State Societies should be encouraged. If it is to be relative and measured by the present standard in any given community then there is no room for State Societies. Every honorable architect of professional ability above the average of his community should be in the Institute. If he is not, the Institute deprives itself of any influence whatsoever in increasing the standard of practice in his community, and what is even worse, it deprives itself of the very attainment of the objects for which it is organized:

> "The objects of this Institute shall be: To organize and unite in fellowship the Architects of the United States of America, to combine their efforts so as to promote the aesthetic, scientific, and practical efficiency of the profession, and to make the profession of ever-increasing service to society."

Certainly that is democratic enough, and yet there are twenty states in the United States of America which have no Chapter. (See Fig. I.) The total Institute member-

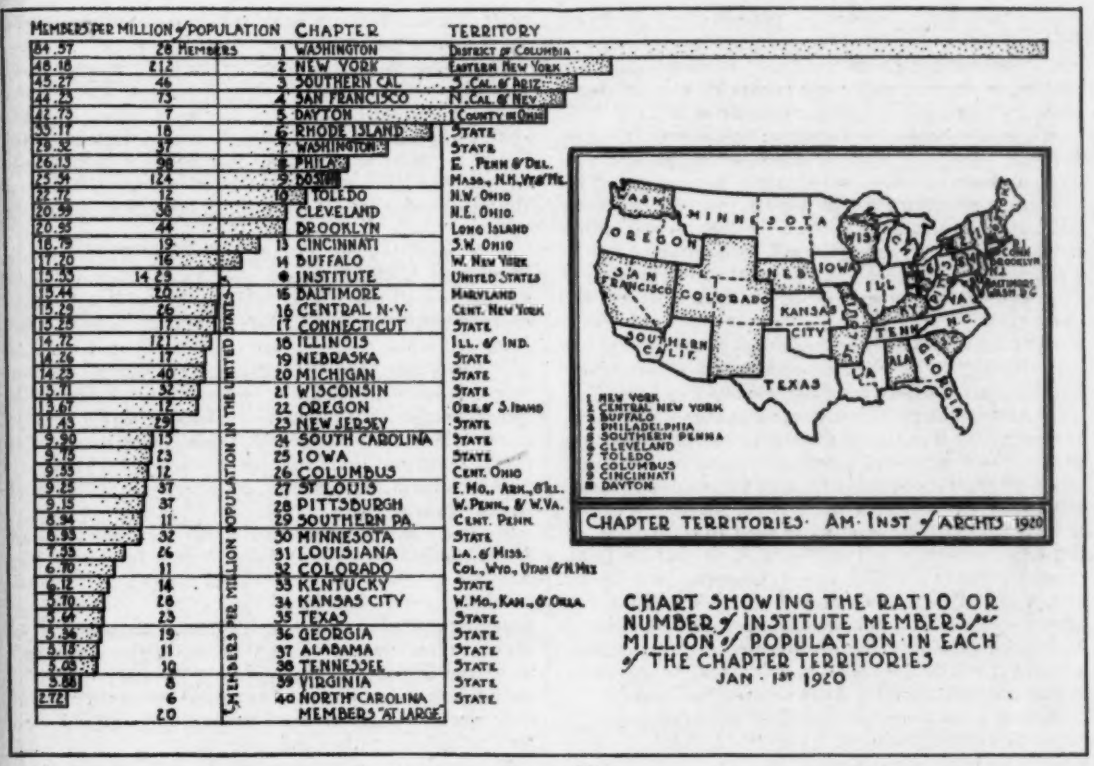

MEMBERS PER MILLION of POPULATION
CHAPTER
TERRITORY
84.57 28 MEMBERS 1 WASHINGTON District of Columbia
48.18 212 2 NEW YORK Eastern New York
45.27 46 3 SOUTHERN CAL. S. Cal. & Ariz.
44.25 73 4 SAN FRANCISCO N. Cal. & Nev.
42.73 7 5 DAYTON County in Ohio
33.17 18 6 RHODE ISLAND State
29.32 37 7 WASHINGTON State
26.13 98 8 PHILA. E. Penn & Del.
25.34 124 9 BOSTON Mass., N.H., Vt. & Me.
22.72 12 10 TOLEDO N.W. Ohio
20.59 38 CLEVELAND N.E. Ohio.
20.93 44 DROOKLYN Long Island
18.79 19 13 CINCINNATI S.W. Ohio
17.20 16 14 BUFFALO W. New York
15.55 14 23 ● INSTITUTE United States
15.44 20 15 BALTIMORE Maryland
15.29 26 16 CENTRAL N.Y. Cent. New York
15.25 17 17 CONNECTICUT State
14.72 121 18 ILLINOIS Ill. & Ind.
14.26 17 19 NEBRASKA State
14.23 40 20 MICHIGAN State
13.71 52 21 WISCONSIN State
13.67 12 22 OREGON Ore. & S. Idaho
11.43 25 23 NEW JERSEY State
9.90 13 24 SOUTH CAROLINA State
9.75 23 25 IOWA State
9.55 12 26 COLUMBUS Cent. Ohio
9.25 37 27 ST LOUIS E. Mo., Ark., & Ill.
9.15 37 28 PITTSBURGH W. Penn., & W. Va.
8.94 11 29 SOUTHERN PA. Cent. Penn.
8.93 32 30 MINNESOTA State
7.93 26 31 LOUISIANA La. & Miss.
6.70 11 32 COLORADO Col., Wyo., Utah & N. Mex.
6.12 14 33 KENTUCKY State
5.70 28 34 KANSAS CITY W. Mo., Kan., & Okla.
5.64 23 35 TEXAS State
5.54 19 36 GEORGIA State
5.15 11 37 ALABAMA State
5.03 10 38 TENNESSEE State
5.88 8 39 VIRGINIA State
2.72 6 40 NORTH CAROLINA State
20 MEMBERS "AT LARGE"
MEMBERS PER MILLION POPULATION IN THE UNITED STATES
1 NEW YORK
2 CENTRAL NEW YORK
3 BUFFALO
4 PHILADELPHIA
5 SOUTHERN PENNA
6 CLEVELAND
7 TOLEDO
8 COLUMBUS
9 CINCINNATI
■ DAYTON
CHAPTER TERRITORIES · AM. INST of ARCHTS 1920
CHART SHOWING THE RATIO OR NUMBER of INSTITUTE MEMBERS per MILLION of POPULATION IN EACH of THE CHAPTER TERRITORIES
JAN · 1ST 1920

FIGURE II

ship in these States is twenty-three, and the total population in excess of twenty million. The Institute serves society here at the rate of about one member per million of population. These states are for the most part architectural deserts. To make them bloom we should have sowers of seed right on the ground, and not a thousand miles away in a center of architectural aristocracy. Chapters should be at once established in many of these states, and in establishing them we must remember that, though the standard of practice is low at the outset, it too is capable of growth.

There are hundreds of eligible architects in the United States, where Chapters exist, who could be admitted to the Institute without reducing its present standard one iota. The additional hundreds, who are perhaps below that standard, and yet above the average ability of their community, should be sought out and invited by the Chapters to become at least Chapter Associates. Until this is done there can be no "fellowship" for them, and the Institute cannot "promote their aesthetic, scientific and practical efficiency."

If either a professionally aristocratic Institute or State Societies, or both, are desired by the Institute, the objects for which it is organized, as stated in the Constitution, should be changed. In seeking to make the Institute more democratic by adopting a relative standard of membership to meet local conditions, we should remember that a most desirable form of aristocracy is still possible within the Institute; that of the election of "Fellows of the Institute." Certainly to be thus honored by the profession is far more desirable than any honor the public will ever hold for an exclusively aristocratic Institute. A more democratic way of nominating Fellows should be found, however.

State Societies of Architects

At the Nashville Convention the Illinois Chapter resolutions regarding State Societies were passed under most peculiar conditions. The first resolution directed that the Board encourage the organization of State Societies, and the second sought Chapter co-operation with such societies. The Board presented both to the Convention with the approval of the second resolution only. The Convention then passed both, without one word from the Board as to why it refused to encourage the organization of such Societies, and without a word of debate on the floor. (See Proceedings Fifty-second Convention, p. 35). At least five Chapters have since taken action against the organization of State Societies.

Mr. Davidson, in an editorial in the Bulletin of the Illinois Society entitled, "What is the Matter with the Institute?" distributed at the Convention, asks the following questions: "Will the Institute encourage the formation of State Societies of Architects, admitting to

membership every honorable practitioner? Will the Institute encourage the Federation of State Societies?" The Institute blindly answered "yes" to the first question, in spite of the fact that mere honorability is an absurd basis for membership in any professional society. Why should we be willing to encourage any society, the professional standing of whose members we confess is that of incompetence? Is that an ethical way to serve society?

The second question need not be answered, for State Societies once organized in the several states will answer it for us. Such a Federation will be inevitable; and we will have created, as the President of the Institute puts it, "A tail big enough to wag the dog." In fact, the tail will be four times as big if the ratio of State Society to Institute membership in Illinois is maintained throughout the country. Let us hope that the tail will be "honorable" but that the brains will remain in the head.

Mr. Hammond, in "Constructive Criticism," in the same number of the Bulletin, in advocating such a Federation, writes: "Well regulated competition between the Institute and Federation would tend to enliven the Institute and should be welcomed rather than avoided." Architectural competitions seem to be hard to regulate at all. But why competition? The objects of two such organizations are identical. The only competition will be for members, and it must ultimately end in a decision. In whose favor will it be—the Institute's or the Federation's? Assuming no decision, the effectiveness of the profession, nationally, will be materially diminished. The suggestion of such a competing body is not constructive criticism.

Quoting again from Mr. Davidson, the State Societies' chief advocate at Nashville, as at Philadelphia the year before, we find the following: (p. 104, Proceedings): "Indiana formed a State Society, modeled after the Illinois Society, and you know what happened to the Indiana Chapter. The only organization in Indiana today is the State Society." Is this supposed to be a recommendation for encouraging State Societies? The Michigan and Iowa State Societies were lauded by the same speaker, as was the Kansas Society by Mr. Goldsmith. More will be said later of the effect of these societies on the Institute in the five States named.

Much has been claimed for the State Society as a training ground for the Institute. Three short years ago at Minneapolis, the Chapter Associate Class was adopted. This class of Institute membership has, properly used, every advantage claimed for the State Society. It provides "fellowship" for small annual dues. It brings a larger number of architects to the service of society from the Institute viewpoint. It provides a period during which the Institute members of a Chapter may observe the professional attainments and ethics of the Associate. It is a balance in which he may be weighed, and if at the end of three years he is found wanting he automatically drops out of the Chapter. The professional existence of an architect which cannot be justified in that time should be no longer sponsored before the public in either Institute or State Society. The possibilities of this class of membership have not been seriously considered. It is our real training school and recruiting ground. The idea of organizing State Societies "to get members into the Institute" is most unwise. If it can be done that way, it can be done by the direct action of the Chapters.

Departing from argument, let us look at some facts regarding the Institute in those States where Societies exist. If service to society is an object, a fair basis for comparison of Institute strength in the various states would be the ratio of members per million of population. In the chart (Fig. I) that ratio is determined, based on the last census and on Institute membership as of January 1, 1920.

This ratio for the five states whose Societies were extolled at Nashville would seem to show an Institute weakness in all but Illinois, which is just above the ratio for the United States as a whole. Michigan is just below, Iowa well below, while Kansas and Indiana are hopelessly so. These four important states, with over ten million people, should be Institute strongholds. Kansas and Nebraska offer a fair comparison. Kansas, with a Society, has two Institute members. Nebraska, without one, and with a much smaller population, has seventeen members. From the Institute viewpoint, encouraging State Societies seems a strange policy.

Six other states with Societies fall far below. In all of the thirteen states with Societies only two exceed the ratio for the Institute as a whole, namely, Washington and Illinois, the New York Society being too young to have had any effect either way. It is interesting to note that the three states in which State Associations organized under the Institute By-Laws show a ratio above that of the Institute as a whole. That these Associations have their weaknesses, there is no doubt. They should have been reorganized rather than disbanded.

The writer can see no incentive for State Society members to join the Institute. They derive all the benefits of the Institute accruing to the interest of the profession through co-membership with Institute members in the Society. Membership in both organizations necessarily diminishes the service given either. In general, we must conclude that State Societies are, and have been, an element of Institute weakness, with Illinois, perhaps, the exception that proves the rule.

Chapter Territories

Fig. II is a similar study based on the Chapter's service to society in the territory under its jurisdiction. Twenty states have no Chapter organizations. They are added for convenience to the territory of Chapters in other states. A more ineffective method of organizing the Institute in these states could not be devised. The fact that there are twenty-three members of the Institute in twenty states with a population of over twenty million is a conclusive proof of the failure of the system. What possible incentive is there for the Boston Chapter to secure Institute members in Maine, New Hampshire, or Vermont, where every legal condition of practice is different? There are three Institute members in these states. What possible interest has the Kansas City Chapter in the laws governing practice in Kansas or Oklahoma, or in housing, city planning and architectural education in those states? Why should the Illinois Chapter desire to increase the effectiveness of the Institute in Indiana?

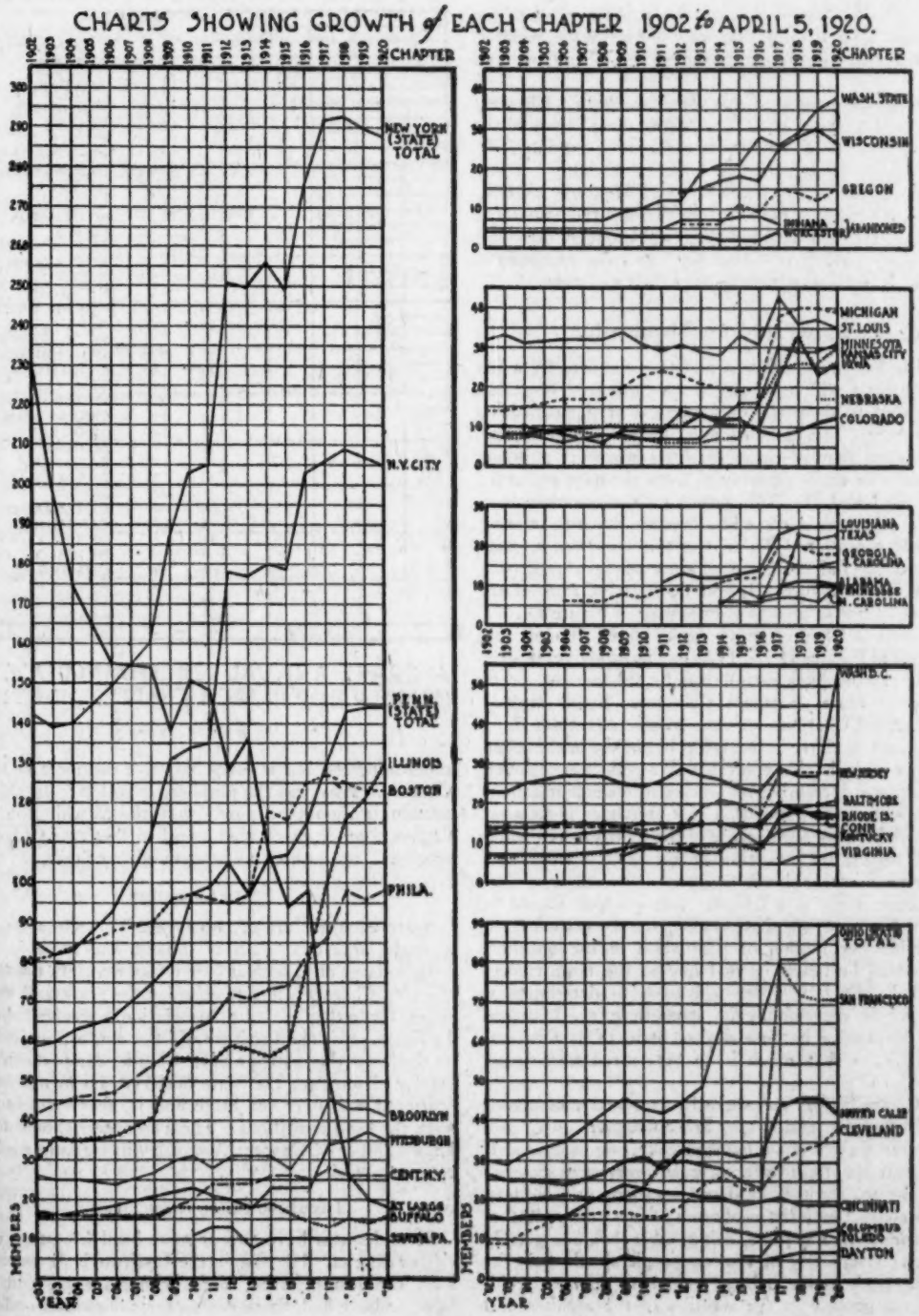

CHARTS SHOWING GROWTH of EACH CHAPTER 1902 to APRIL 5, 1920.
CHAPTER
NEW YORK (STATE) TOTAL
N.Y. CITY
PENN. (STATE) TOTAL
ILLINOIS
BOSTON
PHILA.
BROOKLYN
PITTSBURGH
CENT. KY.
ST. LOUIS
BUFFALO
MEMBERS
YEAR
WASH. STATE
WISCONSIN
OREGON
INDIANA
WORCESTER
ABANDONED
MICHIGAN
ST. LOUIS
MINNESOTA
KANSAS CITY
IOWA
NEBRASKA
COLORADO
LOUISIANA
TEXAS
GEORGIA
N. CAROLINA
WASH. D.C.
NEW JERSEY
BALTIMORE
RHODE IS.
CONN.
KENTUCKY
VIRGINIA
CALIFORNIA TOTAL
SAN FRANCISCO
NORTH CALIF.
CLEVELAND
CINCINNATI
COLUMBUS
TOLEDO
DAYTON

FIGURE III.

It is interesting to note that the Illinois Chapter serves society in its territory at a ratio below the average of the Institute. Is it turning over to the two State Societies the work that the Institute should do in Indiana and Illinois?

There is one answer to this sorry condition. Chapters should be organized in at least eight more states if the professed objects of the Institute are to be attained. In the remaining twelve the "at large membership" should be re-established, for a man in far away Montana can have no interest in joining the Institute through the Minnesota Chapter. He will never attend its Chapter meetings, there is no "union in fellowship" and his professional standard is in no way improved by such a system.

Increased Institute Membership

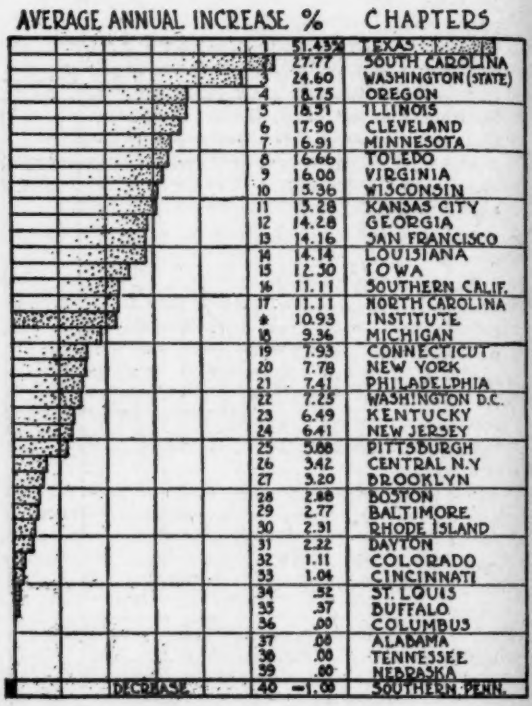
If what has been here written is not followed by a few suggestions, it will have served no purpose. Increased membership is alone the only method of democratizing the Institute. The Institute must have a vigorous membership campaign in those localities where it is weak. These may be easily determined from the data presented in Figures I and II. This brings up the question as to what the Chapters in these localities are doing to improve this weak condition? To answer this question, a study of the growth of all the Chapters since 1902 to April, 1920, is presented in Figure III, and the relative rank of the Chapters in rate of growth is presented in Figure IV.

Obviously a Chapter which ranks above the Institute as a whole in Figures II and IV is in a most active, healthy condition, and is doing its full duty by the Institute. The Washington State, Southern California, San Francisco, and Cleveland Chapters are then to be congratulated.

If the rank is above in one table and below in the other, the higher rank should be in table IV as this indicates that the Chapter is increasing its service to society at a more rapid rate than the population in its territory is growing. If the rank is below the average of the Institute as a whole in both tables, its condition is not good. Does your Chapter rank in this class?

Of course, there is a Chapter factor which should be considered in studying these statistics. For instance, the membership per million of population in the Southern States would be below normal due to the large colored population. Each Chapter will have to determine its own factor in determining its strength in the Institute. The great variation in these vital statistics of the Chapters would indicate that much is to be desired from many Chapters.

Mr. Glenn Brown has recently proposed abandoning all local Chapters, and having State Chapters only. For some reason society has a habit of collecting in cities. If the Institute is to be of "ever increasing service to society" it must be so, through local organizations or Chapters, in actual contact with the local needs of every city. Rather than abandon city Chapters, their number should be greatly increased. Every city of 100,000 people should have its Chapter. Such a city is large enough to demand architectural competence in the solution of the architectural problems through which the great mass of society knows the profession. Such competence is there, perhaps in



AVERAGE ANNUAL PERCENT INCREASE OF MEMBERSHIP IN EACH CHAPTER SINCE 1902

FIGURE IV

small numbers, but it takes only five members to form a Chapter. Why was the number set so low? In this connection it should be noted that the Washington State Chapter, herein rated high as a live Institute Chapter, is proposing two new city Chapters in that State.

State Chapters

State Chapters are of two types: Those in states with a single large city, such as Illinois, and those in states with no large city, such as North Carolina. In the former, the city Chapter will not organize the state and there is room for either a state association organized by the Institute, or, if the Institute will not act, a State Society. In the latter the Institute State Chapter can perform every service claimed for the State Society. Its membership is scattered well over the State and is, therefore, in touch with the local conditions. These Chapters should have a large number of Chapter Associates in training for Institute membership.

Institute State Associations

Several states have two or more local Chapters, either city or district. Here again the Institute is in touch with local conditions. New York, Pennsylvania, and Ohio have, or have had, State Associations organized under the Institute By-Laws. These Associations are, like the Indiana and Worcester Chapters, being thrown into the

Institute discard, and State Societies advocated in their place. No effort whatsoever has been made to correct their faults, principally that of lacking democracy. Article VI, Section 5, of the Institute By-Laws should be amended to provide membership in the State Association for every Institute, Chapter, and Chapter Associate in the local Chapters. In addition to these, every registered architect in the state, if such are legally resident in the state, or every architect of average competence, should be full voting members in the Association. These Associations should be given a voting privilege at the Institute Convention.

Assuming the establishment of Chapters in Albany, Rochester, and Syracuse, in New York State, in place of the present Central New York Chapter, would not an Association of the six local Chapters, plus the extra-Institute membership suggested, be of as great value to the Institute, as is the State Society recently organized? It will be interesting to see the effect of this new organization on Institute membership in New York after a period of five years.

One must wonder where the "tail" of the State Society will wag next and topple over on Institute organism. The Indiana Chapter and the New York State Association are gone. The Ohio and Pennsylvania Institute State Associations will either live or have perished before these lines are in print.

The professed objects of the Institute do depend upon a more democratic Institute, which in turn is a function of membership. To be sure, quality is better than quantity, but we need a little of both more and better architects. State Societies can produce no democracy in the Institute, and their membership, based on honorability, or on a state license to practice, of no real standard as yet, totally ignores the idea of quality. Do not let us say to the small practitioner: "You are not good enough for the Institute, so we will encourage the organization of an architectural society to which your degree of competence, or lack thereof, will admit you."

Increased Institute membership through a membership campaign in every Chapter, through the organization of new Chapters, both city and state, and through the greater use of the Chapter Associate Class of membership is what we need. When we have it, the problems of democracy, state societies, and dues, will no longer vex the Institute Conventions.

In conclusion, let the Chapters and the members accept their share of the burden of criticism. In the final analysis, they alone can carry the principles and objects of the American Institute of Architects into effect.—CHARLES ST. JOHN CHUBB.

The Minnesota Program

The Minnesota Chapter has submitted to the Board of Directors of the Institute the following program of reorganization, and has requested that it be laid before the Convention for Consideration.

1—The Minnesota Chapter wishes to endorse previous suggestions of the Nebraska Chapter emphasizing the need for greater consideration of the local problems of the profession throughout the country.

2—The Minnesota Chapter feels that there is a great danger to the Institute itself, as well as to the profession at large, in the formation of other societies in the architectural profession. Local questions could be and should be solved better by the Institute than by State Societies.

3—To achieve this desirable end the Institute must give more attention to the local needs. Conditions vary in all parts of this country. To speak only of what we know in our territory: The Minnesota Chapter is supposed to cover the states of Minnesota, North and South Dakota and Montana. This is larger in area by 4000 square miles than the territory covered by the states of Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Maryland, Ohio, Indiana, Illinois, Michigan and Wisconsin. According to the census of 1910 the four states of the Minnesota Chapter had a population of 3,612,705, while the twelve states of the other territory had a population of 43,884,739. In the one case one lone Chapter covers the entire territory of four states while in the other case twenty Chapters cover, approximately, the same territory in square miles but including twelve states. How can conditions or standards be the same in these cases? Another interesting difference is that according to the 1910 census there were four cities in the Minnesota territory with a population of over 25,000 while there were 147 such cities in the other territory.

4—In the widely scattered, thinly settled parts of this northwest country it must be obvious that such men as try to practice architecture cannot practice it on the same rules of procedure as in the older parts of the country. Their standards must, of necessity, be different and cannot approach the set standards of the older parts of the country, though, fundamentally, they may be, and in most cases are, as high and fine in principle as those of the best in the Institute.

5—This calls immediately for a different set of standards. This, immediately, calls for LOCAL treatment. We contend that local jurisdiction should therefore be given to the Chapters of the Institute to handle these matters.

6—The answer is not, in our opinion, to try to organize and help these remote cases by the establishment of other societies. If the profession of architecture is to be fathered, helped and advanced it must be through the Institute, unless the Institute is to be merely a name, a prerogative of the few, and its true influence lost to a number of separate societies.

7—We wish to offer the following suggestions:

(*a*) That the country be districted geographically.

(*b*) That each district, under the rulings of the institute, be self-governing and set its own standards of membership.

(*c*) That each of these districts hold its own Convention each and every year, and appoint its delegates to then attend the Annual Convention of the Institute.

(*d*) That every reputable practicing architect be induced to join the Institute and take his part in the work for his particular district.

(*e*) This would raise the membership of the Institute to such a size that the dues could be reduced to the size such as is contemplated by the proposed State Societies and so remove the first and biggest objection to Institute membership.

(*f*) The self-governing feature would insure the LOCAL interest that is now lacking in the Institute and which is the second, if not the first, great reason for the creation of State Societies.

(*g*) That the district and national conventions be devoted to other things than routine business, that being handled by the Board of Directors of the National Body and the District Bodies.

(*h*) That the District Sections of the Institute start a series of educational moves along technical and artistic lines with the idea of helping architects who are isolated geographically and financially so that, by improving their service and its results, the standards of the entire country may be raised and the standing of the entire profession very materially improved.

(*i*) Until the profession has educated itself it is the merest waste of breath to speak of educating the public. It is an axiom that proper service and professional ideas will bring that recognition of the profession which it is now attempting to claim.

Therefore, we, the members of the Minnesota Chapter, ask you to submit the following resolution to the Convention:

Resolved, that the Board of Directors be requested to immediately appoint a committee, one member from each Chapter, to consider the re-organization of the Institute in such way as to make possible the proper local development of all parts of the country; that this committeee proceed to work at once and to prepare a program that can be submitted to the next Convention of the Institute for action at that time; that the fundamental idea, on which this committee shall carry out its work, shall be to make possible a working American Institute of Architects, including all reputable practicing architects without regard to their geographic location or the amount and class of work they may be doing.

A Sequel to the Bricklayer's Party

Following upon the action of members of the Philadelphia Chapter, as recorded in "The Bricklayer's Party," published in the Journal for March, in which was recorded the establishment of a class in plan reading under the direction of Mr Abel, the Institute has received the following appeal:

"Whereas, in conformity with the spirit of reconstruction and Whereas, we are desirous of erecting better and safer buildings in order to attain our object, and Whereas, there has been demonstrated in the class of plan reading for Journeymen Bricklayers of our city, under the supervision of Mr Victor Abel of the American Institute of Architects, the necessity of standardizing the symbols on all drawings, Therefore Be It Resolved: That we, the members of Bricklayers' Union No 1 of the city of Philadelphia, at our regular meeting, unanimously appeal to your learned association to interest your members in bringing about a uniform standard of symbols on all plans so that we may be in a better position to understand them more plainly and thereby secure better results for all parties."

To this resolution the Chairman of the Structural Service Committee has replied that the Committee has been at work for more than a year on standard indications for materials of construction, and that it hopes that the Convention of the Institute will authorize the Board of Directors of the Institute to promulgate these standards as soon as the Committee has completed its labors.

The New School of Architecture at Princeton University

Princeton University announces the maturity of a plan which has been in process of development for several years and which now takes definite shape in the new school of architecture. While the school is not to be formally opened until the beginning of the fall term this year, the presence of several students desiring to take the course has made necessary the opening of most of the courses prior to that date.

The formal announcement states that it is proposed to build the architectural work on the required basis of a Princeton Bachelor of Arts degree, and to that end the school of architecture has been established as a branch of the Department of Art and Archaeology. Thus the school is "designed primarily to coordinate the undergraduate studies of the men electing this Department who look forward to architecture as a profession, to graduate them with the Bachelor of Arts degree in four years, and to fit them for the professional degree in architecture in two additional years."

"It will be observed," says the announcement, "that Princeton University aims to produce an architect with a broad liberal education, trained in his own art, and well grounded in the history of the arts throughout the ages. Practical details, which can be really learned only by experience in an office, are eliminated from the curriculum in order to allow the student to devote all his time to the acquisition of that broad knowledge and point of view which constitute the best training a school can offer him. Quality, not numbers, is sought, and the close personal supervision of each student's work which is made possible by the comparatively small size of the student body. The design problems of the graduate years are criticized, in personal interviews with the students, by prominent architects who have consented to share each year's work in this field and who form the Advisory Board of Architects."

The Advisory Board is as follows: Messrs. Chester Aldrich, Henry Bacon, Ralph Adams Cram, Burt L. Fenner, Frederick A Godley, Thomas Hastings, Charles Z. Klauder C. Grant La Farge, Benjamin Wistar Morris, S. B. P. Trowbridge, and Lloyd Warren.

The Draughtsman's Page

GEORGE BAIN CUMMINGS, Associate Editor

STUDIES IN CO-OPERATION AND DRAUGHTING ROOM MANAGEMENT

To assist in the movement to create a better understanding between architects and their employees the writer has undertaken an inquiry into existing policies of co-operation and methods of management. Some of the most interesting of these are outlined in the paragraphs that follow. Contribution to, and discussion of, these findings are invited. Let us pool our experiences for the common good.

One of the most interesting co-operative plans is being worked out by a group of young men, each endeavoring to establish his own practice. Office space is rented from an older practitioner. Each man has his draughting and desk space, and shares in the use of the reception rooms, and in the services of stenographers, bookkeepers, office boys. When one man has little work of his own to keep him busy, he helps his busy neighbor who cannot handle alone all his own work. All are thus kept continuously employed, overhead expense is held down, each man shares in the experience and ability of the others, there is sufficient flexibility to care for a growing or fluctuating practice, and each man exhibits the apparent possession of a suite of offices much more impressive than he could hope to engage privately. Admission to such a group has to be on an elective basis, of course, because the benefits of the arrangement can be realized most profitably only when all the participants are perfectly congenial.

This plan suggests the possibility of amplification. It would seem profitable for the older practitioners to co-operate in the use of office space and assistance. The combination and concentration of facilities would assist in materially reducing overhead, in solving the serious problems of expansion and contraction as the practice fluctuates, and in keeping the draughtsmen continuously employed, through a reservoir from which all the architects participating in the plan might draw in accordance with their needs. It is conceivable that substantial savings could be effected by placing contracts for blueprinting, stationery, supplies, and telephone service for the whole group.

Another interesting co-operative plan has been worked out to permit of very full participation by the employees in the work and interest of the firm. All the employees who demonstrate their ability and loyalty have a voice in the councils of the principals and heads, and problems of policy and procedure are settled by the vote of all. Matters of design are settled in the same spirit, after open discussion, criticism, and voting. A very large measure of self-government and individual responsibility is allowed the employees who respond splendidly, as would be expected. Any employee may have an interview with any principal or head whenever he wishes, and there is a sincere attempt on the part of all to understand the other man's point of view, and appreciate the good in him. Time is taken at more or less regular intervals to sit down "around the table" and discuss matters of all kinds that affect the profession or the larger life. It is a perfectly free and unrestrained forum, and all work is laid aside for it.

Another feature of this plan is the arrangement by which employees may introduce work into the office, and share in the profit from it. Every member of the organization is encouraged to secure work and bring it into the office. The work is handled like all other office jobs, the one introducing it working upon it in accordance with his ability, and sharing otherwise in the conduct of it. His name appears with the firm's on all instruments of service, and after the job account is closed he receives a percentage of the net profit, which is in addition to the salary he has been regularly paid while the work was in progress.

Profit sharing and bonus plans have been worked out in other instances. In the one case a distribution of a portion of the net profits, when above a certain sum, is made to employees on the basis of length of employment and salary earned. In the other case if a job earns a profit over a certain sum, the job captain or man in charge receives a bonus; or, under a squad system, the members of the squad receive proportionate bonuses. Under such an arrangement a budget is sometimes set up at the beginning of the job, allowing so much cost for each stage of the work. Whatever the captain saves on that budget, is his bonus.

There are at least two objections to either plan mentioned in the above paragraph. One is that effort is stressed away from service and upon profit. Instead of making the service of architecture cost the public less, the tendency is to seek higher fees. Instead of making primary the quality of the service rendered, the tendency is to skimp on that service in order to secure the greater profit. And the second objection is that the average draughtsman, who is trying to order his life in a sensible manner, would prefer a dependable and adequate income to a somewhat smaller regular salary and the speculative prospect of a bonus or an uncertain share in profits. Gambling is unscientific.

Compensation is probably the most usual bone of contention between architects and their men. Where the least trouble over this matter is found, it appears that draughtsmen are paid just salaries—just relatively, as regards the ability of the members of the same organization, and as regards salaries in other organizations; and just absolutely, as regards the cost of living; that their deserts are carefully noted and their salaries adjusted accordingly without pressure from themselves; that a fair allowance is made for sickness, and for making up time lost for legitimate reasons; that the usual holidays are allowed without loss of pay; and that vacation in proportion to length of service during the year is allowed with full pay. It is pretty generally admitted by now that time clocks and systems of checking in and out defeat their own purpose, and that much more can be accomplished with a loyal, spirited organization coming and going according to the clock of its

conscience, than with a herded group who check in and out and watch for a chance to "get even."

The question of time lost through jury duty is answered in some offices by making up to the man the difference between his salary and the amount received for the jury duty. It is recognized in this as in other similar matters that a man must occasionally take time away from his work to care for his personal affairs, and if his attitude and record are good, this time is allowed him without loss of pay.

An enlightened policy in laying off men is being adopted in many offices. Of course, any laying off is to be regretted as a loss in efficiency and a source of economic waste; and it is conceivable that under a broad plan of co-operation, this can be considerably reduced, if not wholly eliminated.

But where it still is necessary to dismiss a man he is given every opportunity to make a new connection without loss of income, no time limit being fixed at the end of which he must leave whether he has secured employment or not. In this same connection, let honor be given to those architects who have the courage to advise those of their employees who have proved that they can never rise in the field of architecture, to apply their effort in the field in which they seem better fitted. The temptation is great to continue to profit by their steady work at low wages. Few resist the temptation. May their tribe increase!

Proposals regarding the training of draughtsmen in offices are being revived. In most offices the men are allowed free access to the books and plates in the firm's library. But in very few is there any attempt made systematically to train and develop the draughtsmen. In many instances there is a definite program of work and study laid down for an office boy, ending in promotion to the draughting room. But then his further development is left to himself, or to the friendly guidance of his older draughtsmen associates.

In a few notable cases a sincere effort is made to give the draughtsmen training in every phase of the work—design, draughting, detailing, engineering, specification writing, superintendence and accounting. This should be more generally done if only to justify our claim to be classified as "professional." A suggestion related to the above has proved of great mutual advantage where tried out; that is, to afford the draughtsman opportunity to visit the work executed from his drawings. It is of the greatest educational value to the draughtsman, and in his increased enthusiasm and more intelligent conception of the meaning of the lines he draws he is of greater value to his employer.

Little details of equipment and service which seem relatively unimportant to the architect may seem quite large to the draughtsman. They all contribute to his environment, they all influence the quality of his work. You will find them in the offices where the employees are contented, loyal and enthusiastic. I refer to such items of equipment as standard, individual drawing tables with private drawers; comfortable stools of the right height; a floor surface or covering that does not chill the feet; clothing lockers, clean toilet facilities, with hot water; individual towels and soap, pure, cold drinking water and individual cups; and to such items of service as the use of the telephone for personal matters; the use of stenographic and typewriting service, and postage and stationery at cost; facilities for receiving callers, mail and packages; financial accommodation in cashing checks, and extending loans where the case is worthy.

One office, appreciating a draughtsman's interest in his finished drawing, presents him with a blue-print of every important or noteworthy drawing made by him. Another office has adopted a wise policy with regard to overtime. On the theory that everyone needs rest and recreation, no employee is asked or permitted to work longer than a total of ten hours overtime in any one week. Most offices close entirely on Saturdays during the warm months of the year, the employees making up the time in accordance with some mutually convenient arrangement.

The more study and thoughtful consideration given to these matters of co-operation and *human* management, the better. With the world so generally upset, it behooves our little vocational group to do all we can to solve our own problems, as a considerable part, and certainly the first part, of our contribution to the solution of the larger problem.—GEORGE BAIN CUMMINGS.

The Architects Small House Service Bureau, Inc., of Minnesota

What with so-called "plan factories;" lumber yards establishing draughting rooms to make "free" plans for buyers of their wares; material manufacturers and associations holding competitions for model houses to advertise their products; the inability of the average architect to design small houses at a price that can tempt the man of small means; and the general lack of knowledge and understanding on the part of the greater public in regard to appearance, taste, comfort and value, the entire architectural situation, in so far as it relates to small houses, seemed, to one group of architects, to be getting into very bad shape. Moreover, due to able but unscrupulous advertising on the part of certain interests, this situation is spreading rapidly to large homes and buildings and is making very definite inroads on the legitimate professional practice of architecture.

To meet this situation a group of Minnesota architects. all, as it happened, members of the Minnesota Chapter of the American Institute of Architects, conceived the idea of a co-operative effort to provide accurate, carefully thought out plans for small houses of 3, 4, 5 and 6 rooms. And so, in the early part of 1919, Articles of Incorporation and By-Laws were drawn up for the "Architects' Service Bureau of Minnesota, Incorporated."

Each architect, or firm of architects, subscribed to one share of stock, at par value of $100.00, and agreed, in addition, to contribute for a stated length of time, sketches of various types of small houses, each member providing two sketches per month on a definitely arranged program. A central office was arranged for wherein those sketches approved by the special Sketch Committee were drawn to scale along certain approved standards and presentation

drawings were made. Working drawings, specifications and bills of material followed in due course until each design was ready for the market.

In the mean time the American Institute of Architects, in Convention at Nashville, expressed itself in favor of the Institute taking action on the small house problem. The results of the small House Committee's work are given in its report to the coming convention at Washington. It is enough to say here that the committee based its plan on the Minnesota idea and that the Board of Directors and Executive Committee of the Institute gave its indorsement to both. Credit should be given the Minnesota Bureau for holding back its plans till the committee was able to work out the national scheme and the approval of the Board was given. The name, Articles and By-laws of the Minnesota Bureau have been changed to conform to those suggested by the committee for the national plan.

The name is now, "The Architects' Small House Service, Bureau, Inc., of Minnesota." Mr. Maurice I, Flagg. perhaps best known through his connection with the Minnesota State Art Commission and the Minnesotan Magazine, is the Director of Publicity and Sales. The first issue of the Bureau's publication is now going to press and will appear in time for the Convention.

The Bureau proposes for the present to give what might be called a limited service. It will have a goodly number of attractive small house plans for sale to prospective builders. By the sale of many of these it can provide them at such a low figure that anyone can afford to use them. Its service will consist of complete working drawings, details, specifications and bills of material including forms of bids and all necessary safeguards for its clients. It will be ready to advise with its clients in regard to finishing, furnishing, and decorating, as well as landscape planning. In making the plans the utmost care is being taken to avoid any useless expenditure. Sizes and dimensions are determined from the stocks carried by the manufacturers and dealers in its territory. Sto.k designs for millwork are used. Advice as to plumbing, heating, and lighting is included.

The publication of the Bureau will be for sale at a moderate price and will contain, in addition to the pictures and plans of the various designs of houses a large and carefully written amount of editorial matter relating to the financing, planning, and building of homes. A certain amount of carefully selected advertising matter will be carried as a help to those interested in building. The Bureau has been fortunate, for the idea appealed so strongly to the different manufacturers and business houses that were approached, that the Bureau is able to regulate the kind and class of advertising it carries and so can be sure that its clients get from its pages only the best advice and suggestions.

There is no way of judging how far the work of the Bureau will progress. Up to the release of the first issue of its publication it will have done absolutely no advertising, lest it be swamped. So much favorable comment has come in from all those who have heard of it that there is no doubt of its success. It has already turned down many applications for work as it desired to make its start slowly and rightly.—EDWIN H. BROWN.

Inter-Professional Movements Abroad

By ROBERT D. KOHN.

Throughout the war, all over the world people seem to have been thinking along parallel lines. It is interesting to note the starting of Inter-Professional movements in England, France, and in this country apparently in the same month and almost on the same day, each without any knowledge of the other. *The American "Inter-professional Conference" organization was accomplished at Detroit, November 29, 1919. In England a preliminary Conference was held on November 22, 1919, and on February 7, 1920, the "National Federation of Professional Technical, Administrative and Supervisory Workers" was duly formed at a meeting held in †London. In France the "Societe des Auteurs et Compositeurs dramatiques" addressed to the Architects in November last an invitation to join in the creation of a "Union Generale des Professions Intellectuelles ou Liberales," which invitation was accepted on December 11, 1919.

There must have been a common impulse back of these simultaneous beginnings, in three countries, to establish co-operation of some sort between professional people, but the impulse expresses itself in strangely different terms in each case. The English movement was organized by more or less official representatives of thirty or more societies. Its draft constitution continues the principle of providing for a Federation of Societies represented by official delegates. The American Inter-professional Conference provides for a continuation of the principle of individual membership rather than a federation of delegates. This was done by unanimous consent to avoid what was considered to be the danger of unprogressive policies likely to result from the co-operation of merely officially appointed delegations from the conservative professional associations of the country.

The attendance at the initial meeting was also quite different in London and in Detroit. The latter included doctors, lawyers, engineers, architects, dentists, librarians, educators, trained nurses, journalists, social workers, landscape architects and research scientists, but the English meeting included representatives of organizations as widely scattered as the Engineering and Shipbuilding Draughtsmen, the Chemists, the Orchestral Association; the Actors, Journalists, and Railway Clerks' Associations, and the National Union of Dock, Wharves and Shipping Staffs. Indeed, the list is so broad in its inclusiveness that one is inclined to notice that while the program called for a "Conference of Professional Associations," there was really effected a "Federation of Professional, Technical, Administrative and Supervisory Workers." The London papers referred to it as a conference of the "Non-manual workers" and "the black-coated workers." The architects who were so much in evidence in the American movement were apparently distinguished by their absence at the inception of the English association: (Indeed the R. I. B. A. is not even mentioned), but this may be due to the difference in the character of the two movements.

For those who are interested, a perusal of the reports of

*See the Journal for January, 1919.
†See the Journal for April, 1919.

the two meetings†† will be very illuminating as to present day national group psychologies. One very evident difference is that the American Inter-professional By-laws make no mention of "classes" anywhere. Doubtless some of its promoters had in mind that eventually this group would spread out and establish relationships with groups of workers in other fields, but for the time being the American movement is trying to bring into co-operation people who belong to groups that have at least a partial development of the professional sense—the sense of an obligation for service transcending the demands of those that pay for it.

As for the French Inter-professional movement that is still apparently in embryo and the accounts that come to us do not clearly define its purpose. "*L'Architecture*" of January, 1920, states that Monsieur Alexandre Bruel had reported at length to the "Societe Centrale des Architectes" on the advisability of having that Society cooperate with the Dramatists and Authors in their move to form a union of the liberal professions. Indeed, this report is printed in full, but while it is evident that Monsieur Bruel recommended a qualified acceptance of the Authors' invitation, (and it appears that this was done), it seems impossible to discover what the worthy architect was trying to say in his report (we must assume that he knew), or to what we may ascribe the qualification in the acceptance, unless it be due to what Monsieur Bruel says is the peculiar and distinctive professional position of the architect: "He is a cultured man; he is an artist; he stands as arbiter between the owner and the contractor and his workmen, hence because of this position he may not take part in any movement which might make him take sides in a conflict between the two." In the next breath Monsieur Bruel seems to say that "the architect has a hard time making a living if he wants to be honest" and he wonders "if he will not presently have to step down out of his 'beau cadre tout a fait inconnu du public.'"

An examination of the reports of these three Interprofessional movements in different countries is certainly very worth while. It is much too early to say which country is on the best path, given the problem of the distinctive national characteristics of each. It is certain that the movements never could be exactly alike and be effective, yet each will unquestionably profit from a study of the other.

Architectural Competition for the Remodeling of a New York City Tenement Block

In the Journal for March there was a summary of the then forthcoming report of the Joint Legislative Committee on Housing and the Reconstruction Commission of the State of New York, with an announcement of the competition to be held as above described. The program for this competition has now been issued, and a copy may be had on application to the Reconstruction Commission, Room 302, Hall of Records, New York City.

††The report of the English Inaugural Conference of Professional Associations is published in the Supplement to the *New Commonwealth*, London, February 13; The history and Abstract of Proceedings of the Organization Meeting of the American Inter-Professional Conference is obtainable from the office of the Executive Secretray, 36 West 45th Street, N. Y.

The Problem is stated as follows: "The remodeling of a characteristic old tenement block in the City of New York, so as to make it a decent place to live in. The object of the competition is two-fold; first to find the best method of improving living conditions in the old-law tenements without entirely destroying the buildings; second to find a plan of remodeling that will encourage such alterations by the demonstration of its economic wisdom and the value that will come from the improvement. The relation of costs to results obtained will be a predominating factor in determining the judgment.

The purpose of the competition is to find solutions that will be applicable not only to the block, which is the subject of the study, but also to similar blocks throughout the city. It is a competition of ideas as well as design.

The remodeling of one house in a bad environment is of little value. The improvement of a group of tenements is of real value. But the solution of the problem of the block as a whole would be of the maximum value to the tenants and owners of each house, to the neighborhood and to the community as a whole.

For the purpose of this study, the block bounded by Rutgers, Madison, Jefferson and Monroe streets, on the lower east side of Manhattan has been chosen. Living conditions in this block are not the worst in the city. Conditions here are characteristic of those to be found in hundreds of other blocks throughout New York.

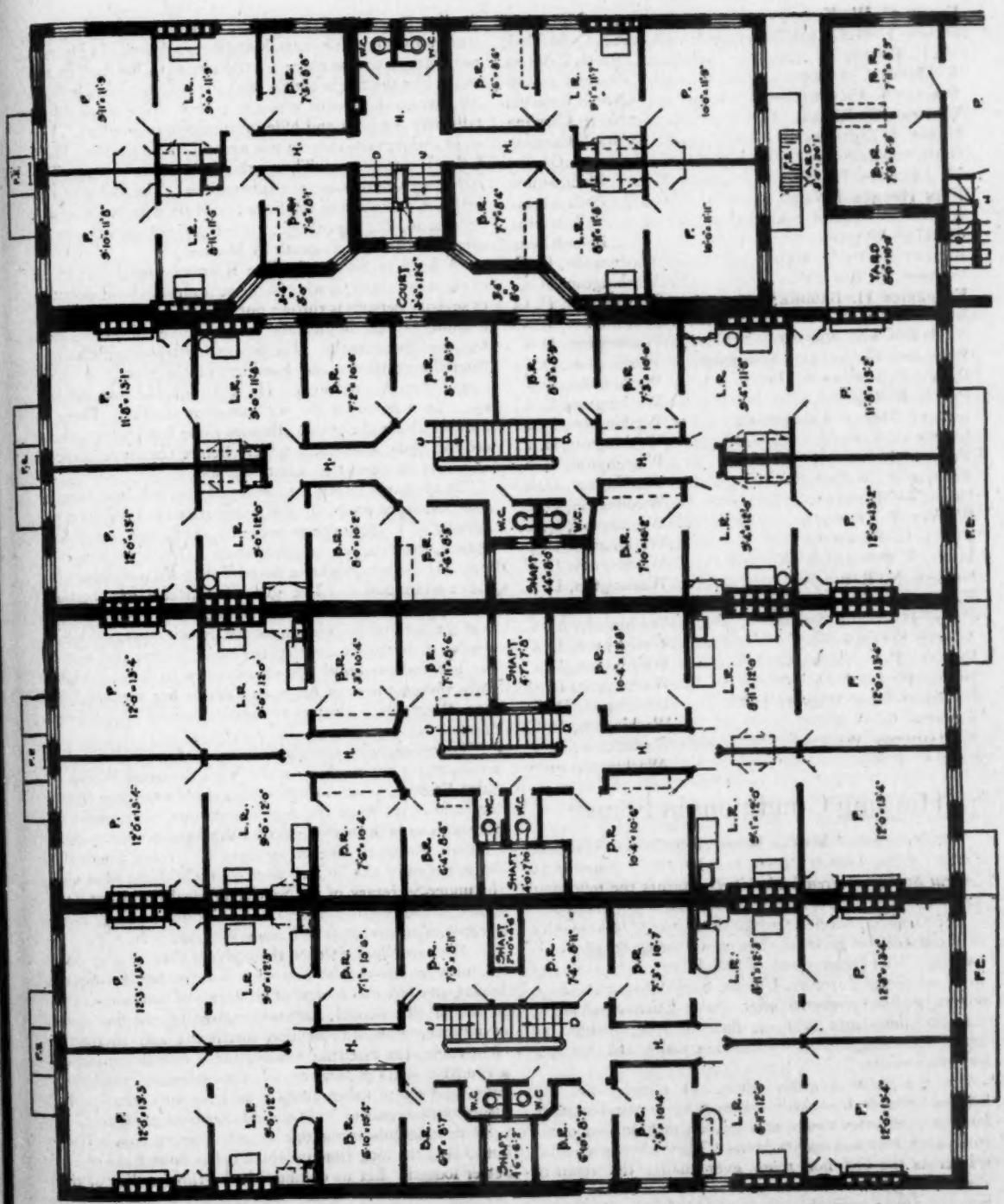
The competition is open to any person or persons. There are two prizes of $1,000.00 each, four prizes of $500.00 and four prizes of $250.00. The competition will close at 1 o'clock, June 15, 1920. The Jury is as follows: Messrs. Allen Robinson, Alfred E. Marling, Edgar A. Levy, Frank Mann, Clarence S. Stein, Charles C. Lockwood, Senator John J. Dunnigan, Andrew J. Thomas, Burt L. Fenner, Robert D. Kohn, Alexander M. Bing, and Miss Lillian Wald.

On the opposite page there is reproduced a section from the scale drawing of the block chosen as the basis of the competition.

Institute Business

New Members Elected

Name	*Chapter*
John Swing Willis	Baltimore
Edwin S. Coy	Brooklyn
Lawrence H. Bley	Buffalo
Louis Greenstein	Buffalo
Duane Lyman	Buffalo
William G. Kaelber	Central New York
Richard Owen Parry	Colorado
G. E. McDonald, Jr.	Columbus
Robert Frost Daggett	Illinois
Henderson Kenneth Franzheim	Illinois
Merritt Harrison	Illinois
Albert A. Honeywell	Illinois
D'Alton Bacon Shourds	Illinois
Ralph Waldo Yardley	Illinois
Virgil D. Alden	Kansas City
Leonard H. Bailey	Kansas City
James H. Forsythe	Minnesota



A Section of the Block selected for the Tenement House Competition in New York City, 218-224 Madison Street.
This is not representative of the worst housing conditions on Manhattan.

Frank C. W. Kuehn	Minnesota
Henry J. McGill	New York
M. E. Boyer, Jr.	North Carolina
A. Heath Carrier	North Carolina
Albert A. Chadwick	North Carolina
Willard G. Rogers	North Carolina
Harry J. Simmonds	North Carolina
George M. Post	Oregon
M. Edmunds Dunlap	Philadelphia
John Horace Frank	Philadelphia
Joseph Patterson Sims	Philadelphia
Charles Willing	Philadelphia
Robert Bruce Atkinson	Washington, D. C.
William P. Bealer	Washington, D. C.
Frederick H. Brooke	Washington, D. C.
John M. Donn	Washington, D. C.
A. Burch Fitz Simons	Washington, D. C.
Benjamin Courtland Flournoy	Washington, D. C.
Parke P. Flournoy, Jr.	Washington, D. C.
Philip R. Hooton	Washington, D. C.
Luther Morris Leisenring	Washington, D. C.
Joseph A. Lockie	Washington, D. C.
Victor Mindeleff	Washington, D. C.
Thomas A. Mullett	Washington, D. C.
Orlie J. Munson	Washington, D. C.
Walter B. Olmsted	Washington, D. C.
Frank G. Pierson	Washington, D. C.
Irwin S. Porter	Washington, D. C.
George N. Ray	Washington, D. C.
B. Stanley Simmons	Washington, D. C.
Delos Hamilton Smith	Washington, D. C.
Albert Speiden	Washington, D. C.
Francis Paul Sullivan	Washington, D. C.
Julius Wenig	Washington, D. C.
Leonidas Polk Wheat, Jr.	Washington D. C.,
Karrett C. White	Washington, D. C.
A. Hamilton Wilson	Washington, D. C.
Earl C. Parke	Washington State

Housing Conditions in France

Under the title, "Do You Know Under What Conditions a Part of the French People Live?" *The Journal of the Central Society of French Architects* reprints the following, written for the *Grande Revue* by Monsieur Pierre Hamp:

"The war has accelerated the slow sinking of humanity in the industrial regions. Never did brick so profit its owners. The Department of the Loire offers examples to be set down: Firminy, Unieux, Saint-Chammond have not the slightest shelter to offer. Saint-Etienne had about 160,000 inhabitants in 1914; the war has brought the figure to 210,000 and increased equally the housing wretchedness.

"In the Soleil quarter, where the miners live, the lodgers' beds serve not only one man by day and another by night, but often two sleep together, making four occupants each four and twenty hours The bed is never idle; neither is the bed nor room ever made; the room is always full. The child is generally absent from these hovels for men, which have been established by those who sell the most wine and the least food possible. One should go and see the lodging of a family in the Rue ——, or the family, D——, father, mother, and eight children from six months to twelve years, living in two rooms. In December, 1917, one saw there a little girl with her feet in the oven; but the fire is gentle, and she will not burn herself. She has no shoes with which to go out. Her tangled hair falls over her neck and hides a tuberculous ganglion. The eight children are alone in this wretched hole all day. Their father is a teamster. The mother is a washerwoman. The father and mother are not tuberculous. The children are, with the exception of the little one of six months, who will become so, like the others. Here is a family healthy in its origin and sent to its death by housing.

"A heap of filth in the Rue Roannelle reaches a third of the way up the facade of a house from which the detritus of seventy persons is thrown out. In the ground floor lives a family of six, mother and four children—fourteen, ten, five, and five months. The boy of fourteen is ophthalmic from the pestilence and humidity of the room. A thick gum covers his red eyes. He will probably lose his left eye. In a recess in the wall are four shelves. There is another above the stove. Besides these five shelves, there are two beds, a bench, a table. Before the stove there is an empty space of two square meters."

"In the same street, the family M—— is lodged free, in a second-story room, by the Committee of Assistance for Refugees. There are three beds and six children—eighteen, sixteen, thirteen, ten, seven, and one. Three are tuberculous. The others might be saved if they did not sleep with the contaminated. The girl of thirteen has become tuberculous and is dying with infinite slowness. Her bed is at the back of the room, opposite the windows; she keeps always in her place next to the wall, leaving the rest of the bed for the child who shares it with her by night. Only the clearness of her eyes lives in her pinched, dry face, about which clusters the untidy hair of the children of misery.

"Therefore, why complain, instead of approving, that among the 3,000 workers in the National Arms Works of Saint-Etienne, most of them young, there were only thirty births in 1916, while the doctors estimate the number of abortions as high as 70 per cent. Why ask women to bear children who must live six or eight in a room where the mother merely sits by and watches them die? Monsieur the under-Secretary of the Service of Health did not dare to ask, in the Senate, on the 14th of December, 1914, when apropos of tuberculosis in France, he said:

"'We must look farther than giving care to the sick; we must go to the bottom and destroy the insanitary hovels, dry up the source of so many of our social and individual ills, alcohol; surround maternity, the first days of infancy, with a protection intelligent and thorough. Gentlemen, the essential wealth, the veritable capital of a country, is its population. Let us safeguard resolutely from the peril of tuberculosis if we have any care for the future of our country.' (*Loud and repeated applause.*)"

"Anti-tuberculosis rhetoric creates a great satisfaction, but during the long time in which it has flowed, no one is better lodged. Let us distinguish the three orders of the fight against tuberculosis; rhetoric, medicine, building. The Minister in the Senate speaks and is applauded; the doctor in his dispensary treats and instructs the sick; but who will demolish the buildings? Parliamentary dis-

course has about as much value as a remedy for social evils as rice powder sprinkled on a cancer.

"France is rich enough to keep herself healthy and clean. The danger of war made her find the money necessary to pay for armament. If she had employed it in making herself healthy, she probably would not have been attacked. She would have been too strong. . . . With a tenth of what she spent in war she would have been able, during the last fifty years, to purify her cities and towns and save from death hundreds of thousands of men, women, and children, who had only a premature death to anticipate.

"Why has she not done it? Why does her money emerge only in face of an absolute emergency such as war? Because of economy. France will die of stinginess. She is committing suicide with a woolen stocking. Misery is a consequence of the spirit of economy. Few men prefer to die rather than to give their money. France does. She applies herself to death through avarice. She has a fear of debt. She prefers death.

"French architecture needs above all to apply itself to the art of destruction. We must demolish the tuberculous house and the sale of alcohol. Caring for the sick will not keep them alive if the spot where death attacks them is left in its filth. Will France decide to clean herself? Let us not wholly despair, but hope that it will be soon if she is to save herself. The Frenchman who takes no interest consents to the risk of his own life. Tuberculosis propagated in misery extends to the houses of the rich. The laundress who washes and irons the clothes of the fine lady, coughs death. The young girl of the fortuned man is attacked because he has not fought to save the children of the rotten ruins in which they are born. The wind that blows from the poor quarter to the rich quarter distributes its germ of death in the homes of those who could have helped to save their race, but who would not. They are chastized by their own iniquity; destiny obliges them to suffer justice, or death, for no one is certain to be saved by himself alone."

Book Reviews

The Design of Factory and Industrial Buildings

By Ernest G. W. Souster, Scott, Greenwood & Son, London

This is a brief treatise of the essential principles of the design of factory buildings, with illustrations of some of the recent important industrial plants of England. After touching upon the changed conditions relative to industrial buildings since the war with particular reference to the speeding up of production and the necessity of welfare work among employes, the author treats the subject by a presentation of the main types of industrial buildings, the essential considerations in connection with the selection of a site and the construction, lighting, heating, ventilation and sanitation of factory buildings. There are also several chapters devoted to such subjects as welfare work, scientific research work, fire protection, and the architectural character of industrial buildings.

The author announces in the preface that there seems to be a well defined demand in England for a "short book dealing with modern factory design." As far as brevity is concerned, this book will undoubtedly meet this demand because its treatment of many important features of this subject might very properly be classed as mere illusions, or suggestive hints of the various aspects of the different parts of the subject. It is to be regretted that the book does not devote sufficient space to a concise and forceful presentation of the really important principles upon which the design of modern industrial buildings are based. The book lacks force or conviction because of the absence of those reasons and facts upon which most of its important statements are based.—George C. Nimmons

News Notes

At its March meeting the Philadelphia Chapter adopted the following resolutions on Quantity Surveying:

"1. That any system of duplication of effort in estimating wherein each bidder separately estimates the quantities, should be condemned."

"2. That all competitive bids should be based upon a detailed schedule of quantities prepared from a survey of the plans and specifications and submitted therewith, the cost of the preparation of such survey of quantities to be borne by the owner."

"3. That while the owner should furnish a quantity survey as the basis of bids and contracts, and should submit them with the plans and specifications, and should pay for same, the bidders should make no charge to the owner for submitting proposals, based on said plans, specifications and quantity survey."

"4. That in general competitive bids should not be invited nor submitted on projects, the plans and specifications for which are not accompanied by a quantity survey, unless the owner agrees to pay a predetermined fee to each bidder for preparing the quantities and submitting an estimate."

These are the resolutions adopted at the Annual Convention of the Association of General Contractors, in Chicago, in March, before which Mr. Henry K. Holsman, President of the Illinois Chapter, delivered a paper in advocacy of the quantity survey. The *Journal* takes a good deal of pleasure from the fact that it has constantly kept this subject before the profession, which now seems on the point of adopting the quantity survey pretty generally.

As The Committee on Buildings of the Chicago Council recommended that the height of buildings be increased from 200 to 260 feet, the Illinois Chapter passed a resolution at its March meeting requesting the Council to refer the matter to the newly-created Zoning Commission. Opinion seems unfavorable to a change in the height restriction, and the experience of New York City is cited, with its memorable result upon land values.

One of the signs of the times is the projected ordinance in Chicago for taxing the professions under a license system. Manifestly we have merely begun to feel the inevitable necessity with which our municipalities are confronted as they contemplate the increased cost of carrying on all kinds of work. The phenomenal rise in taxation in England will no doubt find its counterpart here, but it is surely to be hoped that it will not be a hit-or-miss method.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY W. KERN, *Assistant*

In connection with professional societies, organized bodies, and the following committees of the Institute, working toward improvements in building materials and methods, and higher ideals in the sheltering of humanity:
BASIC BUILDING CODE. CONTRACTS. FIRE-PREVENTION. STRUCTURAL SERVICE

Brick

Building Brick

The word "brick," as commonly used, refers to a rectangular block of burned clay, but in recent years much brick has been made of other basic materials, such as sand-lime, silica, slag and cement. These are consequently designated as sand-lime-brick, silica-brick, etc.

Classification.—With respect to their intended use, brick are roughly classified as (1) Refractory, (2) Paving, and (3) Building brick. Brick may be classified also according to the method of manufacture as Machine-made or Hand-made; according to the method of moulding, as Soft-mud, Stiff-mud, Dry-pressed and Re-pressed; according to color as Clear, Mottled, Fire-flashed and so on; and in some instances according to size as Norman, Roman, English, and Standard.

Refractory Brick.—Refractory or Fire-brick are made of materials selected especially for their resistance to the action of fire and high temperatures. They are intended primarily for lining fire-places, kilns and furnaces, and many of them, while highly resistant to high temperatures, possess but little resistance to the elements, and they are therefore unsuitable for face brickwork or building purposes.

Paving Brick.—Vitrified and hard Building Brick are sometimes used for paving, especially for walks and terraces. The term Paving Brick, in a technical sense, however, refers to a brick specially made of shale or fire-clay for road and street paving, although used occasionally for heavy wall construction and face work. In the kiln these brick are burned to the point of incipient vitrification and annealed by slow cooling. They are tougher, denser, stronger and more resistant to abrasion than ordinary building brick, and through improved methods of manufacture now satisfactorily fulfill the requirements of a heavy traffic paving material. Until very recently paving brick were made in two standard sizes, 2½" x 4" x 8½" and 3½" x 4" x 8½". The American Society for Municipal Improvements on October 3, 1918, recommended that the manufacture of the smaller size be discontinued and adopted the 3½" x 4" x 8½" size as the standard size for all paving brick.

Building Brick—Building brick fall into two classes, Common Brick and Face Brick, according to their place in the structure. Common brick are intended generally for use in backing up face work, for fire-proofing, and for the construction of rough walls and piers. Certain kinds of common brick, especially if carefully selected, are employed for facing purposes, in which case the work is said to be faced with common brick. Common brick made in some localities are well adapted for such use. Some manufacturers list their selected common brick as face brick. The term of "front" brick, as generally understood, refers to a brick especially made or selected for its color, texture, the regularity or irregularity of its surface, etc., and intended for use where exposed to view.

Basic Materials.—The basic materials for building brick are clays (silicate of alumina) and shales, and in small and varying quantities silica, oxides of iron, lime, and sometimes magnesia, potash, soda, and traces of other salts.

Various clays and mixtures of clays and other materials are used for making brick, depending on the product desired. But, of course, the character of the clay available largely establishes the type of brick and the process of manufacture. The surface clays, which are easily and economically obtained, are generally well adapted to the manufacture of common brick, while the deeper clays and shales, containing less impurities, are used where special effects or a better quality of brick is required. Shale is a clay reduced under geological processes to a condition approaching slate, and because of its characteristics is used principally in the manufacture of wire-cut face brick and paving brick.

If alumina is present in too great proportion the clay is referred to as "fat" or plastic and brick made of it will shrink, warp and crack badly during the process of manufacture. The addition of a proper proportion of sand to the clay will overcome this tendency. But if too much sand is used the mixture becomes "short" like a mortar that is too lean and the brick are weak and brittle. In some clays the right proportions of alumina and silica occur naturally and the addition of sand is unnecessary.

Iron oxides, lime, magnesia, potash and soda act as fluxes in fusing the clay when burned. But if present in excess quantities the clay is unfit for brickmaking because the brick, in the process of burning, melt and lose their shape. A moderate quantity of lime tends to lessen the shrinkage of the "green" brick in drying. It should be present, however, only in a finely divided state, as lumps of lime cause the brick to break and pit on exposure and constitute a serious defect.

Iron oxide gives the brick its reddish color which varies in shade according to the proportion of oxide present and the temperature at which the brick is burned. Some clays contain but little oxide of iron and while brick made from such clays may be light in color, they may yet be hard and durable. The quality of a brick, therefore, cannot

be judged by its color alone. Limonite and pyrite, sometimes present in the clay, are classed as impurities. Limonite will cause fused blotches or weak spots, and pyrite burns away leaving flaws.

Processes.—Today but a small proportion of brick are hand-made. During the past twenty-five years great improvements and progress have been made in machine methods of manufacture. Many of the smaller plants have given place to large plants, some of which have a capacity as high as 100,000 face or 500,000 common brick a day.

The process of brick manufacturing is divided into three principal phases, *i. e.*, mixing, moulding, and burning. Details in connection with methods vary to some extent but in principle they are the same. The quality of the finished product depends to a considerable extent upon the skillful handling of the processes of manufacture. The characteristics of brick are dependent not only upon the materials used but also upon the method of manufacture employed.

Mixing.—The basic materials are mixed in power-driven machines in large plants and in horse-operated mixers in small plants. The consistency of the mix and the materials used depend upon the method of moulding to be employed and the surface texture desired. The terms soft-mud and stiff-mud are accurately descriptive of the consistency of the mix. When a rough torn surface is desired a quantity of aggregate is added to the stiff-mud mix to be converted into wire-cut brick.

Moulding.—By the Soft-mud or Slop-process soft plastic clay is pressed into moulds. Practically all hand-made brick are manufactured by this process, but it s not so largely used for the manufacture of machine-made brick. If the moulds are dipped in water just before being filled with clay the brick are known as "water-struck." If sand is placed in the moulds to facilitate their removal the brick are known as "sand-struck." Water-struck brick have comparatively smooth surfaces, slightly rounded edges and corners and are usually more or less irregular in shape and color. They are of pleasing appearance and were at one time manufactured in considerable quantities in New England, but are now only made to a comparatively limited extent. Sand-struck brick are similar to the water-struck brick except that they have a coarser surface texture.

Dry-pressed brick are machine-moulded by heavy pressure upon reduced and finely granulated clays in a nearly dry condition. They are regular and uniform in shape, have sharp, true edges and smooth surfaces. Hydraulic-pressed brick are made by this process.

In the manufacture of stiff-mud brick the clay or shale, mixed to the consistency of a stiff mud, is forced through a die. A mud bar is thus formed having the cross-section of the brick, and this bar is automatically cut to the required size. These brick are known as "End-cuts" or "Side-cuts" according to whether the cut surface is on the ends or the sides of the brick. They may be distinguished from the soft-mud and dry-pressed brick by the rough texture of the cut surface. Stiff-mud brick are sometimes referred to as "Wire-cut" brick.

Re-pressed brick are usually a stiff-mud brick that after being cut has been pressed in a mould or press box and thereby made more regular in shape. Soft-mud brick, after being partially dried, are also sometimes re-pressed. The re-pressing of soft-mud brick increases the regularity in form of the brick and sometimes its strength, but stiff-mud brick are improved rather in form than in physical structure.

After moulding and before burning brick are known as "green" and are allowed to dry until sufficiently hard to be stacked in the kilns. Dry-pressed brick can be placed in the kiln immediately after moulding.

Texture of Surface.—The surface of texture brick varies from the smooth surface of the soft-mud and dry-pressed brick to the rough texture of the wire-cut surfaces of the stiff-mud brick. A brick having an artificially roughened surface with ridges and valleys extending in a vertical direction when the brick is laid in the wall is said to have a rough vertical texture and when extending horizontally when the brick is laid in the wall a rough horizontal texture.

Glazed brick are made of a fire clay base containing feldspar, flint and whiting. The brick are fired at a high temperature until the surface fuses to a transparent glaze. Enameled brick are made by coating the exposed faces of the brick with an opaque enamel applied directly to the face of the brick or a transparent enamel may be applied over a white or colored "slip," the slip coming between the enamel and the face of the brick. After enameling the brick are refired at a temperature sufficient to fuse the enamel.

Burning.—After being stacked in the kilns the brick are subjected to a temperature of from 1,500 to 2,200 degrees Fahrenheit for from five to ten days, depending upon the nature of the clay or the required product and are converted into a vitrified or semi-vitrified mass. The degree to which brick are burned effect the strength, density, color, shape and size of the finished product. The brick exposed to the highest temperature in the kiln are usually denser in structure, darker in color and smaller in size than the others.

According to the degree of burning, brick were until recently roughly divided into three classes, as follows:

1. *Arch or Clinker Brick.*—These are the brick exposed to the greatest heat in the process of burning. They are overburned and are frequently warped, partially vitrified and brittle and are better adapted for hearths, terrace and walk paving and for face work, than for construction work. Improved methods of burning have, however, very largely reduced the percentage of both over and under burned brick in the kiln.

2. *Body, Cherry, or Hard Brick.*—These brick are neither over nor under burned and for general construction work they constitute the best brick in the kiln. It is the object of the manufacturer to produce as large a percentage of this class of brick as possible and in some modern kilns the percentage is as high as ninety.

3. *Salmon, Pale or Soft Brick.*—These are trade terms for under burned brick. But, as before stated, light color does not always signify softness. Brick so referred to in the trade do not possess sufficient strength for use in piers or where heavy loads are to be carried, nor sufficient durability to warrant their use for exterior face work, but they are sufficiently durable and strong for use in connec-

tion with hard and medium brick for the filling and backing of walls which are not called upon to carry heavy loads and when not exposed to the weather.

The personal equation enters into the grading of brick under the above classification and in an attempt to eliminate this the American Society for Testing Materials in 1919 adopted the report of the Committee C-3 on the classification of brick as follows:

"According to the results of the physical tests, the bricks shall be classified as vitrified, hard, medium and soft bricks on the basis of the following requirements."

Name of Grade	Absorption Limits, per cent (increase in weight).		Compressive Strength, on edge, lbs. per sq. in.		Modulus of Rupture, lbs. per sq. in.	
	Mean of 5 Tests	Individual Maximum	Mean of 5 Tests	Individual Minimum	Mean of 5 Tests	Individual Minimum
Vitrified Brick.....	5 or less	6.0	5000 or over	4000	1200 or over	800
Hard Brick.....	5 to 12	15.0	3500 or over	2500	600 or over	400
Medium Brick.....	12 to 20	24.0	2200 or over	1500	450 or over	300
Soft Brick.....	20 or over	No limit	1000 or over	800	300 or over	200

"(*b*) The standing of any set of bricks shall be determined by that one of the three requirements in which it is the lowest."

Color.—Brick may be obtained in the wide range of colors from light gray or cream through the reds, yellows and buffs to practically black. White brick can be obtained only by the use of surface enamels. Colors are obtained by the use of various clays, shale or marl, by the addition of such materials as iron oxide, lime and magnesia and sometimes by the addition of mineral coloring matter. If the brick have been subjected to the reducing action of fire, thereby bringing out the iron and producing darker colors on the face and ends, they are known as "fire flashed," and if of practically uniform color as "clear." Mottled or Pompeian brick are produced either by coloring matter in the clay or by mixing clays of different chemical compositions.

Size of Brick.—While in some European countries there are legalized standard sizes for brick, there are no such standards in this country. The result is that the size of brick varies slightly with the maker and the locality. During comparatively recent years various associations have adopted or recommended standard sizes. They have not, however, until recently adopted the same size as standard. And even now all manufacturers do not conform to the standards adopted by their associations.

The American Face Brick Association in 1918, and the Common Brick Manufacturers in 1920 adopted a standard size of 2¼" x 3¾" x 8" for both face and common brick.

The American Society for Testing Materials in 1919 adopted a standard size of 2¼" x 3⅞" x 8" for building brick, but have recently recommended the adoption of the 2¼" x 3¾" x 8" size.

The average size of the officially standardized brick is, therefore, 2¼" x 3¾" x 8". All manufacturers should now be urgent to produce brick of the standard size.

In referring to standard size for brick it must be understood that these standard sizes are intended to represent close approximations of the average size of the well burned or hard brick. They are not intended to represent absolute fixed dimensions in which no variation is allowed. The shrinkage of brick in burning depends on the raw materials used, the method of manufacture and the degree of burning and it is industrially impractical so to regulate all of these conditions that every brick in the kiln will be of exactly the same size. The harder burned brick will usually average from $\frac{1}{8}$" to $\frac{3}{16}$" smaller than the lighter or under burned brick.

Physical Properties.—Theoretically a brick of the highest quality should be regular and true in shape, free from kiln marks, lumps of lime, pebbles, air bubbles and fissures. It should be well burned throughout, of firm compact texture and fairly even in color. It should give a clear ringing sound when struck a sharp blow with a hammer or with another brick. For practical building purposes it is seldom necessary to insist upon a brick possessing all of these qualifications; a fairly regular well burned brick will generally meet even the most exacting requirements. The various standards of quality depend upon the kind of brick and the method of manufacture employed. For example, a soft-mud brick, classed as regular and true in shape, would not be considered and accepted as such if it were either a dry-pressed or a repressed brick.

The crushing strength of brick varies from 1,000 to as high as 10,000 pounds per square inch. These values are of service in comparing different makes of brick of the same class. Brick masonry is composed of a large amount of mortar, in fact, about one-seventh of the wall, and the strength of the wall is as dependent upon the strength of the mortar and the care with which the brick are layed as upon the strength of the brick. Hence, unless portland cement mortar is used little additional strength is given to the wall by the use of a brick with exceptionally high crushing strength.

A brick of good quality resists the action of fire, acid, and atmospheric conditions, but the life of brick masonry is dependent not only upon the quality of the brick but also upon the mortar and the quality of the workmanship.

As a result of tests on brick piers conducted by the Building Department of Ontario, Canada, the following conclusions were reached.

1. "Absorption entered into the strength of the brick in compression. Bricks having an absorption of 12 per

cent and under were on an average of 38 per cent stronger in compression and about 85 per cent stronger in bonding than the average brick absorbing more than 12 per cent moisture."

2. "The strength of the strongest brick pier load in lime mortar (1.3) was 55 per cent of the strength of the individual brick."

3. "The strength of the strongest brick laid in portland cement mortar (1.3 with one-fourth part hydrated lime, all by weight) was 78 per cent of the individual brick."

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Tests of Brick Columns and Terra Cotta Columns, by A. N. Talbot and D. A. Abrams, University of Illinois, Engineering Experiment Station, Urbana, Ill.

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Building Construction and Superintendence, Part I, Masons Work, by F. E. Kidder.

Building Estimators Reference Book, by Frank R. Walker.

Standardizing Face Brick, by F. W. Donahoe, in Brick and Clay Record, October 3, 1916.

Clays—Their Occurrences, Properties and Uses, by H. Reis.

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The Story of Brick, by The American Face Brick Association, 110 South Dearborn Street, Chicago, Ill.

Brick, How to Build and Estimate and Specifications and General Schedule for a Solid Brick House, by The Common Brick Manufacturers Association of America, 111 West Washington Street, Chicago, Ill.

The Materials of Construction, by J. B. Johnson.

Limestone.

Weathering.—The Structural Service Committee had occasion recently to ask the Bureau of Standards for information on limestone. The Bureau, in complying with the request, stated that it was conducting an investigation to determine the weathering qualities of various building-stones, particularly the action of frost upon them, and asked for reports on existing buildings, giving locations, kinds of stones used, and dates of erection.

The results of the Bureau's investigations will be of great value to the profession. Architects are requested to furnish the Structural Service Committee with any reports or data they may have on the weathering of building stones, especially in connection with specific buildings.

Current Reviews.

Face Brick.—"The Story of Brick," a brochure recently published by The American Face Brick Association, 110 South Dearborn Street, Chicago, Illinois, is historical and descriptive rather than technical. The arguments are presented clearly, attractively, and effectively. From the standpoint of the architect's interest the "Story of Brick" would have had a stronger appeal if more consideration had been given to bonds, patterns, joints, and mortars. These subjects are not developed beyond the point to which they are carried in the handbook of commerce.

The illustrations are exceptionally well selected and reproduced and the subjects admirably portray the character of good brick work. It is unfortunate, however, that in a publication, excellent in so many respects, more restraint was not exercised in some of the claims made for the material. For example, it is stated that for both structural and artistic requirements no other building material can equal brick; that it easily lends itself to the dignity and massive character of the most elaborate and pretentious structures; and that no matter what you intend to build it pays to use face brick. Such claims do not lead to an appropriate use of the material, and are likely to react upon the industry.

There is, of course, a wide difference in the cost of various face brick, including selected commons, and also in laying, depending on the bond, joint, and mortar. While it is true, as stated, that brick may be laid with joints as thick as an inch, attention is not directed to the difficulty of laying brick with such wide joints or the greater cost of the work, and the inexperienced reader might easily be led to expect brickwork of a character far beyond the reach of his pocketbook.

Common Brick Specifications.—The Common Brick Manufacturers Association of America, Scofield Building, Cleveland, Ohio, have published "Specifications and General Schedule for Solid Brick Houses." These specifications, it is stated, have been prepared to assist the prospective home builder, when an architect is not available, and the work is to be done through the employment of a small general contractor. The specifications, schedules and instructions are not only of value to the owner without an architect, but to architects as well, and especially in connection with the preparation of specifications for brick work for small or moderate priced domestic work.

The publication is a sixteen page standard size booklet and is notably free from claims and selling arguments. The specification provision that the brick shall bear the trade mark of the Common Brick Manufacturers Association of America and the statement that this trade mark denotes a product of the highest quality raises some very pertinent questions. To what extent does the association stand back of the quality of the trade marked products of its individual members and in what way is it able to guarantee that brick bearing the trade mark of the association *are* of the highest quality? In this connection the comment should be made that few brick now carry the trade mark. In the published statements of the association no information appears on these points.

Common Brick; Estimating and Construction.—The Common Brick Manufacturers Association have published also a second edition of their booklet entitled, "Brick—How to Build and Estimate." This forty-eight page standard size illustrated booklet contains valuable data on the subject of brickwork in connection with small and moderate priced houses. Like the booklet on Specifications, it is not intended for architects, but as an aid to the isolated home builders.

The first section of the booklet is devoted largely to selling the brick idea. The economy of the material and its resistance to fire are especially stressed. The accuracy of the claims that solid brick walls are always dry and that brick is proof against dampness coming from outside and condensation from inside is questionable, and the wisdom of damp-proofing or furring exterior brick walls is not discussed. The claim made that the thermal conductivity of a brick wall is lower than a frame wall is, in all probability, based on a furred brick wall though it is not so stated.

The handbooks usually place the thermal conductivity of an unfurred brick wall and a well constructed frame wall as approximately the same.

The second section discusses solid brick construction, uses of various mortars, mixing of mortars, brick laying, construction of chases, sills, fireplaces, walks, and so on.

The third and last section is devoted to estimating brickwork. This phase of the subject is well presented. It does not attempt to give prices nor to make comparisons with other materials or methods, but confines itself entirely to instructions, data and tables giving the quantities of the various materials and labor required. The tables include not only the number of brick in walls of different thicknesses, but also the number of brick a man will lay per day in each of the several bonds and with different kinds of mortars and joints.

Reinforced Concrete.—Handbook "Useful Data." Published by the Corrugated Bar Co. Review by Elwyn E. Seelye, Consulting Engineer, New York City.

"Useful Data," published by the Corrugated Bar Company, is well named. Its contents may be summarized as follows: Plates for simplifying ordinary concrete computations. Formulæ for moments, shears and deflections for beams variously loaded. Data on live and dead loading. Standardized sections for slab beams, columns and footings. Data for estimating steel weights and various miscellany.

This book cannot be safely used by a designer who is not thoroughly familiar with its limitations, but in the hands of a qualified engineer it will eliminate much tedious work. It is somewhat colored by the fact that it is issued by a manufacturer. Taken as a whole it would be of distinct value in any draughting room, where reinforced concrete is designed.

Paving Brick, Specifications for Brick Paving.—The American Society for Municipal Improvements, Charles C. Brown, Secretary, 404 Lincoln Avenue, Valparaiso, Indiana, has published its standard Specification for Brick Paving as adopted on October 3, 1918. Part one deals with the brick, its character, size (3½" x 4" x 8½"), inspection, delivery, and tests. Part two deals with pavement construction, the foundation, sand cushion, laying the brick, expansion joints, rolling, portland cement grout filler, coal tar paving pitch filler, asphalt filler, mastic filler and maintenance.

News Items.

National Federation of Construction Industries.—At the first annual meeting of the National Federation of Construction Industries, held March 24–25, in Chicago, Illinois, the Institute was represented by Mr. Emery Stanford Hall. Mr. Hall addressed the meeting on the subject of "Standardization and the American Institute of Architects." He reports that a broad program was discussed and that throughout there was evidence of an appreciation of the industry's obligation to the public.

Fireproofing: Protection of Structural and Reinforcing Steel. Thermal Conductivity of Burned Clay, Concrete, Gypsum, Lime Mortar and "Radix." Abstract of Technologic Paper of the Bureau of Standards No. 130, by Walter A. Hull. A comparison of the heat-insulating properties of some of the materials used in fire-resistive construction. This publication dated November 12, 1919, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C.

The following materials were tested in order to determine their heat-insulating properties when used as a protective covering for steel: Burned clays of various densities; 1, 2, 4, and 1, 3, 6 concretes with gravel, limestone, trap rock, clinkers, soft coal cinders, and blast furnace slag used as aggregates; gypsum of various densities and with various fillers; one specimen of a 1.4 lime mortar, and one specimen of a patented material called "Radix." The materials to be tested were made up in the form of solid cylinders 8" in diameter by 16" long, and were heated in a gas furnace for three hours and thirty minutes at an average temperature of 700 degrees C. (1,292 degrees F.).

From the results of these tests the following conclusions are indicated:

(*a*) That in burned clays the higher the porosity the lower the thermal conductivity.

(*b*) That limestone-concrete heats up more slowly than gravel concrete but that at a depth of 1½" steel reinforcement would fare about as well in one concrete as another, provided there was no spalling.

(*c*) That for a thickness of about 1½" there is but little difference between the thermal conductivity of burned clay and concrete.

(*d*) That the action of lime mortar is similar to that of clay and concrete.

(*e*) That gypsum is a better insulator than either clay or concrete, provided it does not fall off.

(*f*) That heavy dense gypsum mortar is a better insulator than the more porous mixtures. (A gypsum mortar composed of sixty parts gypsum to forty parts water is a better non-conductor of heat than a mortar composed of forty parts gypsum to sixty parts water).

(*g*) That "Radix" is as good a non-conductor of heat as gypsum. (One specimen only tested.)

Fire Prevention.—The National Fire Prevention Association has issued a leaflet in which is projected the plan for "The Fire Chief's Cabinet," a voluntary group of men that can be called together periodically to consult with the Chief of the Fire Department for discussion of fire preventive measures. The moment for such a cabinet is most opportune, for our high fire loss is even more serious today than ever in the past. We cannot even keep pace with the demand for new buildings; we must prevent the destruction of buildings by fire.

Announcement.—Beginning with this issue the Structural Service Department will carry discussions on the following subjects: Brick work; Architectual Terra Cotta; Masonry partitions; Furring and Fire proofing; Building stones; Plaster coatings; Waterproofing and Dampproofing; Painting and Finishing; Glass and Glazing.